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THE EFFECTS OF CONCEPTS OF ART CRITICISM  
USING THREE INSTRUCTIONAL METHODS  
ON SEVENTH GRADE STUDENTS'  
UNDERSTANDING OF PAINTINGS

by



WALTER ILKIW

A THESIS

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THE FACULTY OF GRADUATE STUDIES

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THE UNIVERSITY OF ALBERTA  
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "THE EFFECTS OF CONCEPTS OF ART CRITICISM USING THREE INSTRUCTIONAL METHODS ON SEVENTH GRADE STUDENTS' UNDERSTANDING OF PAINTINGS," submitted by Walter Ilkiw in partial fulfillment of the requirements for the degree of Master of Education.





## ABSTRACT

Background of the Problem. Art educators are becoming increasingly aware that to-day's adolescents need to develop a set of values for living. Aesthetic values may be shaped through the experiences of describing, analyzing, interpreting and evaluating works of art. Determining effective ways to teach pupils to talk about works of art critically is a prime consideration in art appreciation practices.

Problem. A difficulty besetting art teachers in attempting to implement an appreciation program is determining under what conditions students might improve their abilities to understand paintings. Essentially, the question to be answered was which approach appears to be most satisfactory: Would a teacher-dominated, a child-centred, or a functional teacher-pupil classroom situation be more conducive to learning how to talk about qualities and aspects of modern paintings at four levels of art criticism?

Purpose. The purpose of this study was to determine the relative effectiveness of three methods of instruction (formal, functional and informal) in altering seventh-grade students' abilities to describe, analyze, interpret and evaluate modern paintings. A further purpose was to investigate whether boys and girls differed in their manner of responding to paintings and whether level of intelligence produced differences.

Procedures. Three classes of grade seven art students were administered the Wilson Aspective Perception Test as a pre-test. This test, as modified for this study, comprised twenty slides of modern paintings. Students wrote what they saw and what they thought about the

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qualities and aspects of the paintings. The seventy-eight students then received special training during a five-week period in how to perceive and talk about aspects and qualities of paintings. The Formal group was given lecture-type instruction, the Functional group discussed teacher-prepared questions and the Informal class dealt with major problems through class discussions. Instruction for the three groups centred around comparison of slides of the various styles of Picasso's paintings. Lessons were organized to focus upon the use of language to criticize the paintings at the four Critical Process levels - Description, Analysis, Interpretation and Evaluation.

The pre-test slides of paintings, varying in characteristics such as style, content, subject matter, and emphasizing different elements and principles of art were also employed as the post-test in which students again wrote all they saw or thought about the paintings. The responses to both pre-test and post-test were scored according to the taxonomy developed by Wilson and the data was subjected to computer analysis. Analyses of covariance were carried out on the data to test null hypotheses.

Findings. Analysis of the data revealed that highly significant differences occurred at the .01 level in mean gain scores of the total Critical Process levels, and the levels of Description, Formal Analysis and Evaluation. At the level of Interpretation, no significant differences were recorded. There were significant differences between mean gains of boys and girls, the total sample of girls obtaining higher mean scores than the total sample of boys. There was no significant difference in mean gain scores between students classed as High IQ and Low IQ in the three groups.





Conclusions. Results indicate that the Functional method was the superior approach in improving the abilities of students to talk critically about paintings at three of the four Critical Process levels. The Formal method was observed to be inferior to the other two approaches, the Functional and Informal. Girls appeared to talk about paintings in a more informed manner than boys, while High IQ students (above 113) appeared to criticize paintings in the same manner as Low IQ students (below 113). IQ's were measured by the Lorge-Thorndike Intelligence Test Verbal Scale.

On the basis of these results it was concluded that it is possible to alter positively the ways in which seventh-grade students perceive and talk about qualities and aspects of modern paintings using concepts of art criticism.

This study suggests a host of possibilities for investigations into both content and method in implementing the art historical and art critical components of the art curriculum.





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## TABLE OF CONTENTS

CHAPTER	PAGE
I. THE PROBLEM. . . . .	1
Introduction. . . . .	1
Statement of the Problem. . . . .	5
Basic Assumptions . . . . .	6
Statement of Hypotheses . . . . .	7
Definition of Terms . . . . .	8
Used for the Study. . . . .	9
Limitations . . . . .	10
Summary . . . . .	11
II. REVIEW OF RELATED LITERATURE AND RESEARCH. . . . .	12
Aesthetics and Criticism Related to Talk About Art. . . . .	12
Qualities and Aspects of Art Works. . . . .	15
Methods of Instruction. . . . .	18
Discourses about Perception of Works of Art . . . . .	22
Relation of Intelligence and Sex Differences to Appreciation . . . . .	28
III. DESIGN OF THE STUDY. . . . .	32
Setting of the Study. . . . .	32
Population Employed in the Study. . . . .	32
Design of the Instrument. . . . .	32
The Wilson Aspective Perception Test . . . . .	32
Modifications in the Evaluative Instrument . . . . .	33
Development of Instructional Materials. . . . .	37
Instructional Content. . . . .	37





## CHAPTER

## PAGE

Critical Process Levels. . . . .	37
Picasso's Works. . . . .	38
Rationale for the Selection of Visual Materials . . .	38
Pre-Test and Post-Test Slides of Modern Paintings.	38
Bertram's Series of Art Appreciation Filmstrips. .	39
Slides of Picasso's Works. . . . .	40
Description of the Instruments. . . . .	40
The Lorge-Thorndike Intelligence Test. . . . .	40
Wilson Aspective Perception Test . . . . .	41
The Experimental Treatments . . . . .	43
Summary . . . . .	45
IV. COLLECTION OF DATA AND DESCRIPTION OF STATISTICAL	
PROCEDURES. . . . .	46
Administration of Wilson Test as Pre-test and	
Post-test. . . . .	46
Consideration of Personnel for Scoring. . . . .	47
Scoring Procedure . . . . .	48
Scoring Response Mode Categories . . . . .	48
Scoring Aspects of Art Works Categories. . . . .	49
Statistical Procedure for Analysis of Data. . . . .	50
Acceptable Levels of Significance for Statistical Data	51
Summary of Collection of Data and Statistical	
Procedures . . . . .	52



CHAPTER	PAGE
V. ANALYSIS OF DATA AND FINDINGS. . . . .	53
Statement of Hypotheses . . . . .	53
Analysis of Data. . . . .	54
Summary . . . . .	67
VI. SUMMARY OF FINDINGS, INTERPRETATIONS, CONCLUSIONS AND	
RECOMMENDATIONS . . . . .	69
Statement of the Problem. . . . .	69
Hypotheses. . . . .	69
Summary of Findings . . . . .	70
Interpretations of Findings . . . . .	71
Conclusions . . . . .	75
Recommendations for Further Study . . . . .	76
BIBLIOGRAPHY . . . . .	78
APPENDIX A. Sample Lesson . . . . .	82
APPENDIX B. Summary of Content in all Lessons . . . . .	86
APPENDIX C. Instructions for Administering Wilson	
Aspective Perception Pre- and Post-Tests	88
APPENDIX D. Examples of Scoring of Students' Responses	90
APPENDIX E. Experimental Groups' Total Scores of Four	
Critical Process Levels. . . . .	93
APPENDIX F. Random Procedure for Selecting Equal Numbers	
of Boys and Girls in Each Experimental	
Group for Analysis of the Effect of Sex	
on Talk About Paintings at Four Process	
Levels . . . . .	95



## LIST OF TABLES

TABLE	PAGE
I. Analysis of Covariance of Mean Gains Among Groups 1, 2 and 3 on the Wilson Aspective Perception Post-test Scores of the Four Critical Process Levels . . . . .	54
II. Analysis of Covariance of Mean Gains Among Groups 1, 2 and 3 on the Wilson Aspective Perception Post-test Scores of the Critical Process Level Description . . . . .	55
III. Analysis of Covariance of Mean Gains Among Groups 1, 2 and 3 on the Wilson Aspective Perception Post-test Scores of the Critical Process Level Formal Analysis . . . . .	57
IV. Analysis of Covariance of Mean Gains Among Groups 1, 2 and 3 on the Wilson Aspective Perception Post-test Scores of the Critical Process Level Interpretation . . . . .	58
V. Analysis of Covariance of Mean Gains Among Groups 1, 2 and 3 on the Wilson Aspective Perception Post-test Scores of the Critical Process Level Evaluation. . . . .	60
VI. Analysis of Covariance of Mean Gains Between Boys and Girls on the Wilson Aspective Perception Post-test Scores of the Four Critical Process Levels . . . . .	61
VII. Analysis of Covariance of Mean Gains Between High IQ and Low IQ Students on the Wilson Aspective Perception Post-test Scores of the Four Critical Process Levels . . . . .	65





TABLE

PAGE

VIII. Summary of Results

Significance of Differences in Mean Gain Scores Among or Between Experimental Groups. . . . .	67
--	----

IX. Summary of Results

Relative Achievement in Mean Gain Scores Among or Between Experimental Groups . . . . .	68
--	----



## LIST OF FIGURES

FIGURE	PAGE
I. Comparison of Methods of Instruction. . . . .	23
II. Taxonomy of Categories of the Wilson Aspective Perception Test. . . . .	26
III. Slides Presented in Pre-test and Post-test. . . . .	35
IV. Categories, Code and Score Range of the Taxonomy. . . . .	36
V. Model of the Experimental Design. . . . .	44





## CHAPTER I

### THE PROBLEM

#### I. INTRODUCTION

Theory and practice in art appreciation have undergone changing emphasis throughout the last half-century. In the 'twenties, New York city teachers held that "appreciation of the highest forms of beauty could only be acquired through constant associations with such forms."<sup>1</sup> The picture-study methods of the 'thirties and 'forties gave way to the influence of the child-centred school and the writings of such art educators as Lowenfeld. Formal study of great works of art was succeeded by incidental attention to art appreciation. Commenting on this period, Barkan observed:

Though they knew the old canons of beauty could no longer serve as criteria for judgment, more adequate criteria had not yet been formulated. Their reactions, therefore, came in the form of a rejection of all academic criteria.<sup>2</sup>

Interest in the study of adult works of art revived once again in the 'fifties without attendant formal aspects. The aims of art appreciation became one with the aims of creative self-expression, in which pupil needs and interests were considered of prime importance. Into the 'sixties, writings appeared with such typical statements as "the writer believes that art appreciation on the part of children is developed more

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<sup>1</sup>Stanley Skinner, "Pictures in the Schoolroom," in Emery, M.S., How to Enjoy Pictures (New York: Prang Company, 1898), p. 254.

<sup>2</sup>Manual Barkan, "Transition in Art Education," Art Education, XV (October, 1962), p. 15.



naturally if situations involving the child's own art efforts are used."<sup>3</sup>

The growth in the conviction that development in appreciation was best assured through training of the senses is evident in Sir Herbert Read's claims that "elementary education should teach children how to use their senses - how to see, to touch, to listen - it is far from easy to learn the full and exact use of these faculties."<sup>4</sup>

Within the last several years, there has been a decided interest in the direction of a structured program in art appreciation. Barkan<sup>5</sup> places this revival as early as 1957, when he notes that the popular magazine, *School Arts*, then began a regular feature entitled "Understanding Art." As a prime advocate of this movement he states unequivocally:

The controversy in art education to-day on this issue really hinges on the strong contention that learning in art requires careful attention to qualitative criteria that pertain to works of art."<sup>6</sup>

Despite a trend toward creation of comprehensive appreciation programs, in some quarters the attitude prevails that art appreciation is nevertheless being neglected, poorly planned or ineffectively presented. Focussing major attention on appreciation as a major area of the total art program and maintaining that the value of a structured program of visual aesthetic instruction lies in its emphasis upon the

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<sup>3</sup>Julia B. Schwartz, "Art Appreciation," *School Arts*, LXI (September, 1961), p. 49.

<sup>4</sup>Herbert Read, *To Hell with Culture* (New York: Schocken Books, 1964), p. 33.

<sup>5</sup>Barkan, *op. cit.*, p. 16.

<sup>6</sup>*Ibid.*, p. 15.



perception of plastic qualities are such contemporary writers as Smith<sup>7</sup>, Barkan<sup>8</sup>, and Lanier<sup>9</sup>. Barkan in particular notes the importance of such a program in paralleling Bruner's<sup>10</sup> central conviction of intellectual activity anywhere being the same when he states that "the schoolboy learning art is an artist, and it is easier for him to learn art behaving like an artist than doing something else."<sup>11</sup>

Selz<sup>12</sup> contends that we do pay lip service to art appreciation. He cites a recent New York City school system teaching guide for junior high grades as containing a section on appreciation encouraging the teacher to take the pupil to museums, show films, slides, prints and to discuss works of art. He points out, however, that this is not an integral part of the curriculum.

Flanagan<sup>13</sup> points out that "the normal education of the average American does not provide him with adequate means for evaluating a modern

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<sup>7</sup>B. Othanel Smith, "The Logic of Teaching in the Arts," Readings in Art Education ed. J. I. Goodlad (Toronto: Blaisdell Publishing Company, 1966), p. 274.

<sup>8</sup>Barkan, loc. cit.

<sup>9</sup>Vincent Lanier, "Schismogenesis in Contemporary Art Education," Studies in Art Education, V (Fall, 1963), p. 16.

<sup>10</sup>Jerome S. Bruner, The Process of Education (New York: Vintage Books, 1960), p. 14.

<sup>11</sup>Barkan, op. cit., p. 18.

<sup>12</sup>Peter Selz, "Is it Art?", School Arts, XL (Jan. 1961), p. 3.

<sup>13</sup>G. A. Flanagan, Understand and Enjoy Modern Art (New York: Thomas Y. Crowell Company, 1962), p. 3.







picture when he sees it." A summary of studies by McPhee<sup>14</sup> on perception indicate that influence, individuality and independence of aesthetic judgment and taste need to be carefully preserved. Taylor<sup>15</sup> does not appear to be impressed by any success in that regard as he observes that "there seems to be little correlation between commendable activity in the art room and sensitivity to great works of art."

Among objectives of art education from research reviewed by knowledgeable art educators were these two listed by Jacobs:

1. To develop students' sensitivity to and appreciation of art.
2. To develop students' ability to make aesthetic judgments.<sup>16</sup>

Alice listed the following personal and social values to be developed through exposure in art appreciation classes:

1. Deepen and quicken pleasure in seeing.
2. Aid students to become more discriminating in the judgment of art.
3. Lead students to appreciate individuals, their different viewpoints, solutions and interpretations through studies of works of art.<sup>17</sup>

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<sup>14</sup>June McPhee, "Implications for Change in Art Education," Readings in Art Education ed. J. I. Goodlad (Toronto: Blaisdell Publishing Company, 1966), p. 190.

<sup>15</sup>Joshua Taylor, "To Do and Not to See," Readings in Art Education ed. J. I. Goodlad (Toronto: Blaisdell Publishing Company, 1966), p. 240.

<sup>16</sup>P. A. Jacobs, "Objectives of Art Education and Boy Scout Handicraft Kits," (unpublished Doctor's dissertation, Penn State University, 1965).

<sup>17</sup>Sister M. Alice, O. S. B., "Art Appreciation Values for Teacher and Student," Catholic School Journal (September, 1966), p. 33.



One of the needs of an adolescent student is to develop a set of values for living. The corresponding objective set out by the National Art Education Association is that "a pupil must develop creative and aesthetic values through the doing, expressing, evaluating, shaping, refining and passing of judgment."<sup>18</sup>

It would appear then that there is a need for developing ways of responding to art. Among the practical, intellectual, emotional, contemplative, associational and imaginative ways, Munro<sup>19</sup> also lists verbal expression. Lowenfeld<sup>20</sup> emphasizes the importance of basing any aesthetic appreciation on the reaction of the pupil. Though discussion and analysis cannot supply aesthetic experience, they do indeed encourage it. Determination of effective means to teach pupils to talk about works of art meaningfully is a prime consideration in art appreciation experiences.

## II. STATEMENT OF THE PROBLEM

One of the difficulties confronting art teachers who attempt to implement a program in art appreciation is in determining under what

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<sup>18</sup>National Art Education Association, Art Education in the Junior High School (Washington, D. C.: NAEA, 1964), p. 28.

<sup>19</sup>Thomas Munro, "Powers of Art Appreciation and Evaluation" Art in American Life and Education, 40th Yearbook National Society for the Study of Education (Chicago: Plumptre Press, 1941), p. 334.

<sup>20</sup>Viktor Lowenfeld, Creative and Mental Growth, 3rd Edition, (New York: McMillan Company, 1957), p. 33.



conditions students are most likely to improve their abilities in talking more intelligently about qualities they perceive in works of art.

The purpose of this study was to determine the relative effectiveness of three methods of instruction (formal, functional and informal) in altering seventh-grade students' abilities to describe, analyze, interpret, and evaluate modern paintings.

Essentially the question to be answered was whether a teacher-dominated, a child-centred, or a functional teacher-pupil classroom situation was more conducive to learning how to talk about qualities and aspects of modern paintings at four levels of art criticism.

A further purpose of this investigation was to determine whether boys and girls differed in their manner of responding to works of art and whether level of intelligence produced differences.

### III. BASIC ASSUMPTIONS

The first five assumptions of this study are derived from Wilson's<sup>21</sup> experiment to establish a taxonomy of categories useful in scoring critical processes of talk about qualities and aspects of paintings. His taxonomy was used following the administration of the pre-test and post-test in this study, thus a close relationship exists between these two investigations.

The following assumptions were made:

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<sup>21</sup>Brent G. Wilson, "The Development of an Instrument to Measure Aspective Perception of Paintings," (unpublished Doctoral dissertation, Ohio State University, 1966).







1. Perception takes place in a dynamic visual situation where there is a transaction between two actors, the perceiver and the perceived.
2. One actor in the situation has a mode of perceiving which depends primarily on what his past experiences, values, assumptions and purposes prepare him to see. Language plays an important part in the perceptual preparation of an individual.
3. The perceived, the second actor, has its own special character - a set of qualities and aspects - with its ability to "show itself" to the perceiver.
4. The perceiver has a perceptual mode which falls on a continuum. The two extremes of the continuum are:
  - a) aspective mode - perception is broad; attention is directed to a variety of aspects of the object.
  - b) customary mode - perception is narrow - emphasis is on individual; perception is a mere passive recognition.
5. The language used to describe perception is indicative of what an individual perceives and how he goes about his perceptual task.
6. The Wilson Aspective Perception Test and the Lorge-Thorndike Intelligence Test are valid measuring instruments.

#### IV. STATEMENT OF HYPOTHESES

The following null hypotheses were tested in this study:

Null Hypothesis 1. There are no significant differences in mean gains among the three experimental groups on the Wilson Test scores on



the four Critical Process levels.

Sub-Hypotheses of 1. There are no significant differences in mean gains among the three experimental groups on the Wilson Test scores on each of the following Critical Process levels:

- a) Description
- b) Formal Analysis
- c) Interpretation
- d) Evaluation

Null Hypothesis 2. There are no significant differences in mean gains between boys and girls on the Wilson Test scores on the four Critical Process levels.

Null Hypothesis 3. There are no significant differences in mean gains between High IQ students and Low IQ students on the Wilson Test scores on the four Critical Process levels.

## V. DEFINITION OF TERMS

For more meaningful comprehension of what the researcher is attempting to determine, an understanding of the sense in which the terms are used in this study is necessary.

Formal group. The class of students subjected to the traditional lecture-by-teacher, listening-by-students method of instruction.

Functional group. The class of students answering and discussing questions prepared by the teacher.

Informal group. The class of students subjected to a self-discovery approach to learning.

Critical Process levels. The descriptive, formal analytic, interpretive and evaluative processes considered as levels of talk about



art in which students relate their statements concerning the qualities and aspects they perceive in paintings. These process levels are the essentially four major dimensions of art criticism.

Categories. The qualities and aspects perceived in paintings as classified in the Wilson Test.

High IQ. The rating of the upper half of each student group as measured by the Lorge-Thorndike Intelligence test.

Low IQ. The rating of the lower half of each student group as measured by the Lorge-Thorndike Intelligence test.

## VI. NEED FOR THE STUDY

This study investigated an area much neglected in present-day art education practices. Art teachers' learning-by-doing methods during many years have obscured the need for a learning-about-art approach to supplement the creation of art products only. Growing concern for awareness of, and sensitivity to, the increasingly complex world is reflected in the trend towards developing students' discriminatory and perceptive abilities. The use of language is one avenue through which this growth may become evident.

Though a number of experimental and descriptive studies have been made with senior high and college students in the areas of sociological and psychological factors affecting appreciation, little has been researched<sup>22</sup> concerning understanding and appreciating art forms at the junior high school level.

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<sup>22</sup>Vincent Lanier, Doctoral Research in Art Education (Los Angeles: University of Southern California, 1962).





There is still much to be learned about how individuals react to works of art - what aspects they perceive and what they think or tend to say about qualities they see. This study attempts to focus on the critical processes of talk about paintings at four levels or degrees of difficulty. This is examined through an organized situation in which three methods of instruction were used to improve students' abilities to talk intelligently about modern paintings. To the extent that three differing instructional approaches were used and the concept of four critical process levels introduced, the researcher has added to the findings of Wilson<sup>23</sup>, in particular, and to art education in general.

## VII. LIMITATIONS

Results of the investigation were restricted to consideration of the grade and school system from which the population was drawn.

The Formal and Informal methods of instruction used in this study, although ideally at the extremes of a teacher-dominated and child-centered continuum, in practice would likely tend toward the middle from both these ends. It is highly unlikely that students in the Formal group would ask no questions, and it is also highly unlikely that students in the Informal group could carry on independently without some teacher guidance.

The normal fifty-minute classroom instruction period proved adequate for lesson presentation. However, extensions of time were necessary for administration of the pre-tests and post-tests, particularly the post-tests, when students were to be given as much writing

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<sup>23</sup>Wilson, loc. cit.



time as they required to record their responses.

#### VIII. SUMMARY

Classroom instruction in art criticism which enables the art student to improve his abilities to talk intelligently about paintings is gaining greater emphasis as art educational programs become aesthetically-oriented. The need for developing worthwhile units of instruction in ways of looking at and responding to works of art is readily apparent. It was the purpose of this investigation to determine which of three instructional methods was instrumental in improving students' responses to modern paintings at four Critical Process levels of discourse.



## CHAPTER II

### REVIEW OF RELATED LITERATURE AND RESEARCH

This chapter presents an overview of research and literature related to this study generally, and develops its historical and philosophical background. The material in the chapter is considered under six sub-headings: the first deals with aesthetics and criticism as a background of theory for this study; the second relates to qualities and aspects that are viewed in works of art; the third concerns various methods of instruction or approach in the teaching of art; the fourth focusses upon discourse about perception of works of art; the fifth attempts to synthesize some of the findings concerning the relation of intelligence to aspects of art learning; and the sixth directs attention to the effect of sex on achievement in related areas.

#### I. AESTHETICS AND CRITICISM RELATED TO TALK ABOUT ART

A historical orientation indicates that aesthetic theory is central in our perception of works of art, for it tells us not simply what to look for, but also how to look at art. Feldman<sup>24</sup> feels that works of art stimulate aesthetic experience because they have their qualities arranged purposefully and skillfully to encourage perception. Among his goals of art criticism, Feldman outlines these:

1. Understanding - how we can look at art and think about it in order to yield the maximum knowledge about their real or alleged merits. We want to know how information is related to the excellence of the work.

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<sup>24</sup>Edmund B. Feldman, "The Nature of the Aesthetic Experience," Report of the Commission on Art Education, Jerome J. Hausman, ed., National Art Education Association (Washington, 1965).





2. Delight or pleasure - a quantitative benefit - the increase of satisfaction.
3. A very real interest in sharing what we have discovered in art. This is why we talk about art.<sup>25</sup>

The three goals refer particularly to the "pedagogical criticism which is intended to advance the artistic and aesthetic maturity of students."<sup>26</sup> If art criticism is talk about art, then it is probably one of the ways students may share the contents of their inner lives without embarrassment. Feldman further develops his theory of art criticism by stating that the tools of art criticism should be:

1. Wide acquaintance with art generally and certain art in particular. This implies understanding of the styles and functions of art, social and cultural contexts, opinion of critics and scholars and technical factors.
2. Critical sensibility - ability to react to the variety of meanings in a work or discriminating among one's feelings in the presence of a work.
3. Judicious temperament - ability to withhold judgment until all the evidence is in.<sup>27</sup>

The first of these places serious limitations on students who have only begun to familiarize themselves with the great heritage of works of art. The remaining two are abilities which may be developed through experience. Feldman discusses the kinds of critical judgment as being: (1) formalism, (2) expressivism, and (3) instrumentalism. Following his assumption that there is a form, system or process in arriving at critical conclusions, Feldman establishes his four stages or processes in the

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<sup>25</sup>Edmund B. Feldman, Art as Image and Idea (New Jersey: Prentice-Hall, 1967), p. 444.

<sup>26</sup>Ibid., p. 453.

<sup>27</sup>Ibid., p. 454.



performance of art criticism:

Description, Formal Analysis, Interpretation and Evaluation consist of fundamentally different operations which a critic must perform, and their sequence follows the order of the easiest operation to the most difficult. And since art criticism is more empirical than deductive, the stages proceed from the specific to the general, i.e., we focus on particularly visual facts before drawing conclusions about their collective value.<sup>28</sup>

This theory of art criticism formed the basis for the selection of content presented to the experimental student groups in this study.

Several writers have discussed the nature of aesthetic training. Burt<sup>29</sup> observes that "some capacity for aesthetic perception is inherited by everyone but left for the most part untrained and underdeveloped." He further discloses that studies have shown almost every child is capable of some degree of aesthetic education provided that it is adapted to his age level, personal interests and aptitudes.

Meier<sup>30</sup> in a ten-year study investigated factors in artistic aptitude. He found that two established tests for artistic ability have singled out the quality of aesthetic judgment as the basis for art criticism underlying the appreciative aspect of an aesthetic response. Burt<sup>31</sup> cites studies by Daniels, Jasper, Whorley and Walton as showing that aesthetic judgment is present in children to some degree, subject to considerable development through learning and experience, but probably never mastered by anyone. It appears that aesthetic judgment is not the

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<sup>28</sup>Ibid., p. 468

<sup>29</sup>Cyril Burt, "The Psychological Aspects of Aesthetic Education," Art Education, XX (March, 1967), pp. 26-28.

<sup>30</sup>Norman C. Meier, "Factors in Artistic Aptitude: Final Summary of a Tenyear Study of a Special Ability," Readings in Art Education. (Toronto: Blaisdell Publishing Company, 1966), p. 114.

<sup>31</sup>Burt, loc. cit.



application of a set of rules, but rather something acquired by the individual on the basis of some innate neuro-physical constitution.

In summary, writings and research indicate that talk about art is criticism based upon the quality of aesthetic judgment. There is a discipline involved in arriving at critical decisions. This process of talking about art can proceed systematically from the easier specific descriptive statements to the more general, but more difficult, evaluative or judgmental reactions to works of art. Students at the secondary level ought to be able to learn how to talk about art intelligently through exposure to many works of art, the opportunity to form critical opinions and some form of guidance with respect to the qualities and aspects to be perceived.

## II. QUALITIES AND ASPECTS OF ART WORKS

Several writers believe that active learning of important ideas, concepts, rules and principles enables the student to regard art works aesthetically. Smith<sup>32</sup> indicates that medium, form, content, subject matter, expression, representation and style are important considerations in perceiving works of art.

Unconcerned about what students like or dislike, find beautiful or ugly in art, or with how they may rank works of art in order of preference, Schwartz rather believes it is more important to "stress the ability to perceive form in art, to grasp relations between visible details, to understand associated meanings in relation to design and to

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<sup>32</sup>Ralph A. Smith, "Aesthetics and Criticism," Art Education, XX (March, 1967), p. IX.







evaluate a work of art intelligently."<sup>33</sup> She states that specific criteria such as "extent of colour contrast," and "clarity of space-relations" are valuable considerations in studying works of art. She espouses the value of comparison of art works on the basis of specific criteria in being able to show the specific ways in which individuals resemble and differ from each other in responding to works of art.

Aspects of art works have been categorized variously. Hospers<sup>34</sup> classifies aspects under material, formal and associational and prefers that the latter two be enjoyed together rather than as separate entities. Broudy contends that it is possible to make intelligible and defensible judgments about a work of art with respect to:

1. Sensory elements - line, shape, colour, texture.
2. Technique - how to paint in a certain medium.
3. Formal design - form in terms of such principles as harmony, balance, centrality, recurrence, similarity, variation, symmetry, opposition, rhythm, dominance.
4. Expressiveness - the degree to which the work is expressive.
5. Perceptual interest.
6. Extra-aesthetic functionality.<sup>35</sup>

Lanier has developed an interesting schema whereby an observer perceives a work of art through a set of screens which constitute what is being contemplated:

1. Specific - what other people say about the particular work.
2. Cultural - what friends and family think about the work.
3. Perceptual skills - how much one has been trained to see.
4. Elements and principles - how much one knows about design.
5. Encoding message - what one knows about particular symbols.
6. Historical background - identification of time, place.

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<sup>33</sup>Julia B. Schwartz, "Art Appreciation," School Arts, LXI (September, 1961), p. 49.

<sup>34</sup>J. Hospers, "Problems of Art," Aesthetics and Art Criticism, (Chicago: Rand McNally, 1966), p. 24.

<sup>35</sup>Harry S. Broudy, "The Structure of Knowledge in the Arts," LXI (September, 1961), p. 49.



7. Judgment - how one evaluates the work.
8. Associations - relationship of the work to one's life.<sup>36</sup>

Seiberling reasons that through intelligent examination of the art of the past or present, we may gain insight into the criteria that have existed and turn them to account in critical decisions. He gives particular emphasis to form of a work of art as "requiring expressive qualities as well as organization."<sup>37</sup> His principles of visual form include such qualities and aspects as colour, opposition, contrast, balance, rhythm, repetition, shape, texture, unity and composition.

Sheppard<sup>38</sup> establishes a rationale for examining the qualities of a work of art in order to make judgments about its form, content and subject matter. He advises using comparison of aspects of paintings to stimulate discussion and analysis.

To summarize, it would appear that formal expressive and associational aspects are necessary considerations in criticism of works of art. Qualities of line, form, colour, texture; historical identification; explanation and judgment; these are all understandings basic to adequate criticism of works of art. Though different emphases are given these aspects and qualities by writers according to their Formalist, Emotionalist or other views, a consensus would indicate inclusion of the categories established by Wilson<sup>39</sup> in his taxonomy.

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<sup>36</sup>Vincent Lanier, "Canalizing Curricula in the Arts, A New Concept," Fine, Journal of the Fine Arts Council, The Alberta Teachers Association (Winter, 1968), pp. 9-23.

<sup>37</sup>Frank Seiberling, Looking into Art, (New York: Rinehart and Winston, 1959), pp. 265-280.

<sup>38</sup>Carl D. Sheppard Jr., Looking at Modern Painting, (New York: W. W. Norton and Company, 1961), p. 15

<sup>39</sup>Brent G. Wilson, loc. cit.



### III. METHODS OF INSTRUCTION

Varying methods of teaching art appreciation have been employed at different age levels, consequently preferences are not the same. Such methods of handling works of art in class as lecture by teacher, teacher-directed discussion, questioning by pupils and, or, teacher, incidental exposure, tangential inquiry, studio-oriented study and other approaches have been tried successfully and otherwise.

Brandon<sup>40</sup> compared four methods of teaching art appreciation to college students. He found that no significant difference in effectiveness was evident between lecture method, lecture with audio-visual, lecture with practical, and illustrated lecture with practical work. His conclusion was that his study supported those who say that appreciation cannot be taught or developed through teaching; however, the testing instrument he used was not designed to measure what was taught during his study.

Patton<sup>41</sup> also feels that appreciation, like good taste, cannot be taught. She believes that when children perceive paintings, they should have the opportunity to speak honestly, unrestricted and unhampered by what others may think of their reactions.

Berry<sup>42</sup> contends that appreciation can hardly be taught. To her

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<sup>40</sup>Charles M. Brandon, "The Relative Effectiveness of Four Different Approaches in Developing Art Appreciation," (unpublished Doctor's dissertation, Nashville, Tennessee, 1961).

<sup>41</sup>Helen Patton, "Making Friends with Great Works of Art," School Arts, LXI (November, 1961), p. 15.

<sup>42</sup>Ana M. Berry, Understanding Art, (New York: Studio Publications, 1952), p. 15.







way of thinking, the language of art appeals directly to the emotions so that the study of works of art only is necessary. All that need be done is to state a few general principles and the elements which go to make up the language.

The aforementioned writings would tend to support the researcher's Functional and Informal methods used in this study, since both give rise to varying amounts of student and teacher discussion.

Garson and Russell<sup>43</sup> outlined two methods of teaching art appreciation. Their studio-oriented method stressed visual qualities, while the appreciation-oriented approach utilized discussion of art objects with the aid of Joshua Taylor's 'Learning to Look' criteria for subjective and expressive content. Since this was not a research project, no preference was indicated.

Scherpereel,<sup>44</sup> made a study to determine whether a structure of contrast equated with motives of inquiry was comparable to a structure of similarity equated with motives of description. He concluded that a system of contrast to promote inquiry into art appreciation was preferable and of utmost importance.

Gaitskell puts forth these views regarding method:

1. There should be no formal teaching, since children are too immature to profit from such instruction.
2. Informal lessons should be conducted at intervals.
3. Teaching should occur in close association with the pupils' production in art, and then only when required.<sup>45</sup>

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<sup>43</sup>A. Garson and M. Russell, "Alternative Approaches to Teaching Art," Art Education, XX (June, 1967), p. 8.

<sup>44</sup>Richard C. Scherpereel, "Structure for the Teaching of Art Appreciation; An Analysis of Two Sequences of Instruction," (Doctor's dissertation, George Peabody College for Teachers, 1966).

<sup>45</sup>Charles D. Gaitskell, "Art Appreciation for Children," National Elementary Principal, XXXVIII (April, 1959), pp. 9-10.



He goes on to state that the formal method has not proved to be especially effective. Munro held the same point of view when he wrote "urging people to like things or preaching about our own likes is not the most effective way to get results."<sup>46</sup>

Though meeting with some disfavor, the Formal method of instruction was included in this study. At least one researcher has been supportive of this, though not within the same context. Neperud<sup>47</sup> made a fifth-grade investigation concerning selected instructional methods as they affected drawing development where certain visual elements were employed. He found that eight selected visual elements could be learned effectively and incorporated in drawings. This learning, however, interacted with teaching methods and student characteristics. His results showed that a teacher-centred lecture method was more effective in producing change in drawing than a co-operative method in which the teacher acts in the capacity of a guide. His child-centered or spontaneous approach placed greater emphasis on maturational than situational factors, and proved inferior in encouraging understanding and use of visual elements.

Other informal and child-centred methods have shown some favour. Annis<sup>48</sup> investigated the effects of selected approaches to teaching art

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<sup>46</sup>Thomas Munro, op. cit., p. 340.

<sup>47</sup>Ronald W. Neperud, "An Experimental Study of Visual Elements, Selected Art Instruction Methods and Drawing Development at the Fifth-Grade Level," Studies in Art Education, VII (Spring, 1966), pp. 3-12.

<sup>48</sup>Eleanor A. Annis, "The Effect of Certain Teaching Methods on College Art Students' Art Attitudes and Appreciations," (unpublished Doctor's dissertation, Penn State University, 1961).





appreciation to college students compared with the usual methods of instruction. Twenty-five students in each of the following methods constituted the experimental group: (1) lecture-slide-lecture, (2) student discussion with materials, (3) experimentation in different media, and (4) discussion followed by materials. The two other control groups of thirty students each, were slide-lecture and art structure. Two teachers each had at least one section of each method. Pre- and post-test results were analyzed for gains on the Beittel Art Acceptance Test, Kieselbach Aesthetic Perception Test; Cut Paper Performance Test and the Art Concept Composition Test. Results showed that the discussion with materials and the discussion followed by materials groups made greater gains than the groups subjected to lecture methods of instruction. It was also evident that greater gains were made by students who were more actively involved in the class. Her findings bear out this researcher's premise that student groups involved in class discussion in the area of appreciation may make better progress than those students who are passive, though personality characteristics need be considered.

Gaitskell<sup>49</sup> believes that integrating expression and appreciation of art forms is presently the most widely accepted and practised approach to art instruction. Child and Schwartz<sup>50</sup>, reporting on their study concerning gratifications in appreciating art, found that the most valuable approach would be emphasizing independent exploration by the child, the teacher taking the role of a guide rather than being an authoritative schoolmaster.

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<sup>49</sup>Gaitskell, op. cit., pp. 9-10.

<sup>50</sup>I. L. Child and R. S. Schwartz, "Personality and the Appreciation of Art," Art Education, XX (January, 1967), pp. 33-35.





A recent publication<sup>51</sup> recognizes these approaches to teaching appreciation:

1. Lecture: notes, recite-recall, emphasis upon facts.
2. Teacher-directed discussion: selected questions.
3. Pupil-directed discussion: random questions.
4. Incidental or providential: exposure, learning by osmosis.
5. Tangential: through use of illustrated matter in other areas.

A summary of the afore-mentioned approaches would disclose the three most widely used methods are the broad directions suggested and defined by Lanier<sup>52</sup> as the (1) Formal - traditional or teacher-dominated, (2) Functional - mid-way between the Formal and the Informal, and (3) Informal - child-dominated. Since these are the approaches that were adapted to this investigation, a summary comparing their characteristics as defined by Lanier appears in FIGURE 1. Though he advocated the methods are used generally for art instruction, they are applicable to specialized instruction in art appreciation with modifications as necessary. He further espoused his preference for the Functional method in which aspects of motivation, presentation and evaluation are related functionally to the educational process, the WHO, the WHAT and the WHY.

#### IV. DISCOURSE ABOUT PERCEPTION OF WORKS OF ART

Much has been written and researched about perception, but intelligent talk about works of art tends to be a relatively new area

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<sup>51</sup>\_\_\_\_\_, "Matters Related to Art Appreciation," In-Service Workshop Publication, Art Department, Edmonton Public School Board, (March, 1967).

<sup>52</sup>Vincent Lanier, Teaching Secondary Art, (Scranton: International Textbook Company, 1966), pp. 128-129.



FIGURE 1

## COMPARISON OF METHODS OF INSTRUCTION

CHARACTERISTIC	METHOD OF INSTRUCTION		
	FORMAL	FUNCTIONAL	INFORMAL
Type	Traditional; Directed	Midway Between	Free Expression
Atmosphere	Authoritarian	Purposeful	Laissez-faire
Situation	Structured	Teacher-pupil organized	Unstructured
Curriculum	Adult- determined	Teacher-pupil planned	Child-centred
Motivation	Extrinsic; fear, punishment	Intrinsic	Self-discovery
Presentation	Dictatorial	Demonstration and practice	Self-directed
Learning	Factual	Ideas, Concepts	Inquiry
Pupil Interest	Not Considered	Teacher-aroused	Pupil-aroused
Pupil Abilities	Not considered	Considered	Considered
Learning rates	Not Considered	Considered	Determined by ability
Evaluation	Precise: objective	Objective and subjective by teacher and pupil	Self-evaluation
Enthusiasm	Low	High	Relatively High



of investigation in the field of art education. Greater recent interest in aesthetic education will undoubtedly spur researchers to investigate relevant aspects of art criticism. Ecker has this to say:

Justification is terminally non-linguistic; and the crucial criterion of the success of written and oral criticism is apparently its referential adequacy, its ability to make in some way more adequate one's perception of what is there. If the description is vivid enough and at the same time true to the qualities to be found in the work, then the linguistic gesture, 'That is a good painting', is superfluous. Justification of aesthetic judgments is properly carried out in descriptive rather than explanatory language. Descriptions must be referentially adequate; they must be capable of directing attention to what is there to be perceived in the interest of more adequate perception.<sup>53</sup>

Not all writers place this much emphasis upon description.

Beardsley has given us a method of categorizing talk about works of art by classifying critical reasons into:

1. Subjective
  - a) Genetic - relation of the work to its antecedent conditions.
  - b) Affective - effects of the work on individuals or groups.
2. Objective - attention to the object itself on its own merits.<sup>54</sup>

He develops his rationale by pointing out that Genetic reasons are not a good basis for criticism, for they are not relevant and sound. They refer to the artist's intention, the success of the expression, workmanship, originality, sincerity and the like. Affective reasons are inadequate by themselves, denoting pleasure, interest, movement, excitement, emotion and other feeling-toned reactions. Descriptions and interpretations are subsumed under Objective reasons, which may be further subdivided into (1) degree of Unity or dis-Unity, (2) degree of Complexity or

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<sup>53</sup>David W. Ecker, "Justifying Aesthetic Judgments," Art Education, XX (May, 1967), pp. 5-8.

<sup>54</sup>Monroe C. Beardsley, "Aesthetics and Criticism," Aesthetics and Art Criticism, (Chicago: Rand McNally, 1966), pp. 308-323.







Simplicity, and (3) Intensity or lack of it. He sums up his position by stating that when the popular mode of setting forth reasons is set aside, what remains are objective statements which are the proper reasons to advance in art criticism.

There had been no valid instrument in use which could give an indication of precisely what an individual perceives, nor how he responds to, a work of art. Wilson<sup>55</sup> undertook an exhaustive study to develop and test an instrument designed to analyze the descriptions of qualities and aspects of modern paintings by means of a twenty-eight category taxonomy. He found that the way in which upper elementary pupils perceive paintings could be significantly altered from a more usual to a more desirable mode.

A modification of Wilson's Aspective Perception Test was necessary in this researcher's investigation in order to render it more discriminatory among Process levels of discourse. A revision of the categories of his taxonomy appears in FIGURE II.

Barkan and Chapman have developed a set of Guidelines for art instruction through television for the elementary school in which they classify examples of statements used by informed observers of art works, the art critics:

1. Definitive - which establish the meaning of terms in the context of art, such as subject matter and form.
2. Descriptive - which direct attention to particular qualities and relationships among them, such as:
  - a) parts and sections
  - b) relations between parts and sections
  - c) repeated parts

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<sup>55</sup>Wilson, op. cit.



FIGURE II

## TAXONOMY CATEGORIES OF THE WILSON ASPECTIVE PERCEPTION TEST

INDIVIDUAL RESPONSE  MODE CATEGORIES	Evaluational  Mode	Affective  Evaluation
	Descriptive  Mode	Anecdote-Poetry Affective Description Relational Analysis Synthesis Location Direction
ASPECTS OF ART WORKS  CATEGORIES	Sensory  Qualities	Shape  Colour  Line  Texture
	Technical Aspects	Media Technique
	Meaning Aspects	Literal Meaning Conventional Meaning Inferred Meaning
	Tertiary Aspects	Modal Aspect Formal Aspect
	Historical	Naming Artist Naming Work Naming Style Context
		Not Classified



3. Interpretive - which clarify the meaning or characterize the feelings the work may convey. These clarify:
  - a) what is depicted
  - b) what is portrayed
  - c) what is suggested
  - d) what something may look like
  - e) the feeling something gives us
4. Explanatory - which refer to conditions (historical, geographic, psychological) that affect art and help to account for some of its aspects.
5. Judgmental - which are statements of value or criteria which present a conclusion about the merit or significance of a work.<sup>56</sup>

Smith defines critical activity as overlapping phases which contain statements ranging from the cognitively certain to the cognitively less certain at the following levels:

1. Description - by and large involves naming, identifying, and classifying.
2. Analysis - a close look at the components and elements, or details that make up a work, the larger groups or complexes into which they are composed and the relationships they sustain.
3. Interpretation - to say something about the meaning of the work as a whole.
4. Evaluation - some kind of summation or assessment of the merit of the work; good or bad, degree of unity, complexity, intensity.<sup>57</sup>

Precisely the same four process levels are detailed and clarified with examples by Feldman.<sup>58</sup> That section of his book was the basis for lesson planning in this researcher's investigation.

Recent studies<sup>59</sup> of classroom discourse reveal that the level of

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<sup>56</sup>M. Barkan and L. Chapman, Guidelines for Art Instruction Through Television for Elementary Schools (Bloomington: National Centre for School and College Television, 1967).

<sup>57</sup>Ralph Smith, op. cit.

<sup>58</sup>Feldman, op. cit., pp. 470-497.

<sup>59</sup>B. Othanel Smith, "A Concept of Teaching," Language and Concepts in Education (Chicago: Rand McNally, 1961), p. 101.





dialogue between teacher and pupil seldom exceeds that of common sense, with the result that opportunities to develop disciplined patterns of thought are left unexplored.

In summary, though we are quite unable to study the effect which art works have inside us, we can however consider the statements, assertions, observations and perceptions which have been made about particular art objects outside our persons. Although these statements arise within us, they are capable of being carefully examined by others. Process levels of intelligent talk about paintings extend on a continuum from the simpler cognitive statements which are Descriptive, through Formal Analysis, Interpretation, to the more complex affective Evaluative critical reactions. In Smith's words, this involves "performing certain logical operations - defining, explaining, conditional inferring and valuing."<sup>60</sup>

#### V. RELATION OF INTELLIGENCE AND SEX DIFFERENCES TO APPRECIATION

At the present time, there has been a gradual change in the conceptualization of intelligence to a multi-dimensional rather than a uni-dimensional model. There may very well be a high positive correlation between intelligence and appreciative abilities, since appreciation can be considered a creative process.

Kneller<sup>61</sup> sees correlation between intelligence and creativity as being high though not absolute. A high intelligence does not

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<sup>60</sup>B. Othanel Smith, op. cit., p. 274.

<sup>61</sup>George F. Kneller, The Art and Science of Creativity (New York: Holt, Rinehart and Wilson, 1965), p. 8.



guarantee high creativity. Torrance claims "few people are highly creative who are not also highly intelligent."<sup>62</sup> The child who is able to organize form aesthetically to a high degree is often said to be gifted, and this kind of giftedness is considered to be one type of creativity by Eisner.<sup>63</sup>

Madeja's study<sup>64</sup> of two methods of teaching art involved one hundred thirty-five high school students divided into three high-ability and three low-ability groups. One approach emphasized instructional, the other convergent, methods. Data were collected to ascertain differences in the general development of creativity, art products and creative attitudes. One finding was that the intelligence, academic achievement and verbal creativity factors have a strong positive relationship. Art ability defined in the study maintained a significant correlation with intelligence. A further finding disclosed the divergent method resulted in a more aesthetically-oriented end product when used on individuals of high art ability (or high IQ in this study).

In the construction and validation of a test to measure untrained aesthetic judgment, one of the important findings that Williams<sup>65</sup>

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<sup>62</sup>E. Paul Torrance, "Education for Creativity," Creativity: Progress and Potential, ed. Calvin W. Taylor (New York: McGraw-Hill, 1964), p. 89.

<sup>63</sup>Elliott W. Eisner, "A Typology of Creative Behavior," Readings in Art Education, ed. E. Eisner, David Ecker (Toronto: Blaisdell Publishing Company, 1966), p. 328.

<sup>64</sup>Stanley S. Madeja, "Comparison of Two Methods of Teaching Art to Students of High and Low Art Ability," (Unpublished Doctoral dissertation, University of Minnesota, 1956.)

<sup>65</sup>Clarence R. Williams, "Construction and Validation of a Test of Aesthetic Judgment in Art," (Doctor's dissertation, University of Arkansas, 1967).





obtained was that the correlation coefficient between test results and IQ scores was not significant.

The literature is inconclusive in regard to the relationship of intelligence differences to creative and aesthetic abilities. It appears that results in studies differ, being largely dependent upon which component factors may be operative in any experiment.

There is a sizeable amount of reliable research concerning sex differences;<sup>66</sup> however, a negligible amount is relevant to art appreciation. Grambs and Waetjen<sup>67</sup> contend that girls can be taught to become better inquirers and ask more questions than boys. This has an implication for a discussion approach to teaching art appreciation. Chansky<sup>68</sup> investigated over five hundred grade nine boys' and girls' vocational inclinations by analyzing scores on the California Test Bureau Picture Interest Inventory. He found no significant differences between boys and girls in aesthetic interest. Fourth grade elementary children weaved an imaginary story around pictures they were shown and made up titles for abstract paintings in Minuchin's investigation.<sup>69</sup> Results showed that girls were more responsive than boys, more imaginative, open-minded and able to react with flights of fantasy. This was a creative product at which the girls seemed more successful.

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<sup>66</sup>Eleanor Maccoby, The Development of Sex Differences, (Stanford: Stanford University Press, 1966), p. 67.

<sup>67</sup>Jean D. Grambs and Walter B. Waetjen, "A New Right for Boys and Girls," National Elementary Principal XLVI (November, 1966), p. 61.

<sup>68</sup>Norman M. Chansky, "Sex Differences and the Picture Interest Inventory," Vocational Guidance Quarterly XV (September, 1966), pp. 71-74.

<sup>69</sup>Patricia P. Minuchin, "Sex Differences in Children: Research Findings in an Educational Context," National Elementary Principal XLVI (November, 1966), p. 46.





Neperud<sup>70</sup> found that high-IQ female groups of fifth-grade children made significantly greater mean gains in drawing development than the other combinations of low, high-IQ; and male, female students. IQ and sex differences were factors limiting children's abilities to profit from visual elements of instruction.

It is likely that many studies reviewed in the literature would have led the investigators to draw different conclusions had separate analyses been made for males and for females. Nevertheless, it would appear that females do exhibit aesthetic abilities somewhat superior to those of males. More specifically in appreciation, the researcher would hazard the conclusion that girls tend to show more freedom and open-ness in talking about works of art.

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<sup>70</sup>Neperud, op. cit.



## CHAPTER III

### DESIGN OF THE STUDY

#### I. SETTING OF THE STUDY

The experiment was conducted in a junior high school in the Edmonton Public School District No. 7, during the period comprising seven weeks from April 29 to June 14, 1968. The three experimental grade seven classes were scheduled for two fifty-minute periods per week. Each class was involved in twelve lessons in addition to writing the pre-test and the post-test instrument. These students were members of the researcher's regular art classes enrolled in the normal junior high art program of the Edmonton Public School Board.

#### II. POPULATION EMPLOYED IN THE STUDY

Students of both sexes, ages ranging from eleven to fifteen, comprised the total population of seventy-eight individuals. The number of boys differed from the number of girls both totally and in Groups 1 and 3. These students had received some form of art instruction during the course of their elementary education, generally at least four years. None of them were involved in any kind of art instruction outside the classroom.

#### III. DESIGN OF THE INSTRUMENT

##### The Wilson Aspective Perception Test

The Wilson Aspective Perception Test<sup>71</sup> is a means for the

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<sup>71</sup>Wilson, op. cit.



measurement of the perception of paintings by analyzing and scoring the statements which an individual makes about the qualities and aspects viewed in paintings. Thirty-four slides of a wide range of twentieth-century paintings are viewed during two separate sessions in which individuals being tested write statements about what they see or think about these paintings. The language used is analyzed through the twenty-four category taxonomy Wilson developed. They are the two Evaluational Mode categories, the six Descriptive Mode categories, and sixteen Aspects of Art Works categories, which appear in FIGURE II.

Categorized responses are scored on a point system according to their relation to other aspects or modes. Consistent use of certain minimal numbers of categories means an individual is perceiving in a customary manner; whereas consistent use of a greater number of aspects of art works categories indicates aspective perception is the way an individual perceives paintings. It is further possible to determine how paintings are evaluated, the way in which responses are made, and what aspects are being viewed.

The Wilson Test is administered as both a pre-test and as a post-test to ascertain any differences in gains attributable to experimental treatments. The same slides are used in both tests and ample time is provided to make written responses to the paintings.

#### Modifications in the Evaluative Instrument

Revision of the Wilson Aspective Perception Test was deemed necessary for purposes of this investigation in order to render it more suitable from the standpoints of the writing time required of the students and also the scoring categories amenable to classification into the four Critical Process levels. Thus a re-organization was effected in two





areas: the number of slides presented and the scoring of the categories.

Twenty slides were used rather than the thirty-four in the original Wilson instrument. Elimination was carefully undertaken with full concern that characteristics of paintings be as representative of the modern art period as possible. Where slides of a specific title that were used in the original test were not available, a comparable slide was substituted. A list of the slides employed in this investigation for both the pre-test and the post-test appears in FIGURE III.

The Taxonomy of Categories of the Wilson Aspective Perception Test appears in FIGURE II. It was felt that to render the taxonomy more sensitive to the requirements of this study, a distinction was necessary between six terms as they were used descriptively and as used in a formal analytic sense. Reference to shape, colour, line, texture, media and technique by identification only constituted description, whereas stating the qualities of these items indicated formal analysis rating. FIGURE IV contains the researcher's modified Taxonomy of Categories, the code used in scoring and the range of points awarded each category.

A further refinement was necessary in the category of Literal Meaning which may be classed as Description when illusions or recognizable primary aspects are people, animals, plants and inanimate objects; or as Interpretation when the actions or uses of these aspects are given. Therefore these are coded "Lit<sub>d</sub>" for Literal Description and "Lit<sub>i</sub>" for Literal Interpretation. The modification of the instrument facilitated analysis of the written statements into meaningful categories for more effective scoring.



FIGURE III

## SLIDES PRESENTED IN PRE-TEST AND POST-TEST

(read down)

C H A R A C T E R I S T I C S			I	C	S	N	T	S	L	T	L	M	C	P	L	F	A	B	S
			l	o	u	e	y	i	e	i	o	u	o	a	i	n	u	t	
			l	n	b	n	c	m	n	x	g	v	b	r	n	g	i	i	i
			u	t	j	'	h	b	e	t	h	e	i	t	d	u	m	l	l
			s	e	e	O	n	o		u	t	m	s	r	s	r	a	d	l
			i	n	c	b	i	l		r	'	e	t	a	c	e	l	i	
			o	t	t	j	q	i		e	D	n	i	i	a	s	s	n	L
			n		e	u	s			a	t	c	t	p			g	i	
			a		M	c	e	m		r				e			s	f	
			r		a	t				k								e	
			y		t	i													
					t	v													
					e	e													
					r														
No.	Title	Artist																	
1	Women Indoors	Leger	*	*	*	*	*	*	*					*					
2	The Paddock	Dufy	*	*		*	*	*	*	*						*	*	*	*
3	Two Women and Flowers	Leger	*	*	*	*	*	*	*	*						*			
4	A Day in the Country	Roy	*	*	*	*	*	*	*	*						*		*	
5	The Fair of Trone	Desnoyer	*	*	*	*	*	*	*	*						*			
6	Landscape	Metzinger	*	*	*	*	*	*	*	*	*	*	*			*		*	
7	Cityscape	Feininger	*	*	*	*	*	*	*	*	*	*	*			*		*	
8	Blue Horses	Marc	*	*		*	*	*	*	*	*	*				*		*	
9	Broadway Boogie Woogie	Mondrian	*		*	*	*	*	*	*	*	*							
10	Voyage of the Moon	Nash	*	*	*	*	*	*	*	*	*	*						*	
11	Guitar and Jug	Braque	*	*	*	*	*	*	*	*	*	*	*					*	
12	Sick Child	Munch	*	*		*	*	*	*	*	*					*			
13	Cypresses	Van Gogh	*	*	*	*	*	*	*	*	*	*				*			
14	The Typographer	Leger	*	*		*	*	*	*	*	*	*	*						
15	End of the World	Patelliers	*	*	*	*	*	*	*	*	*	*	*			*		*	
16	Moonlight	Chagall	*	*	*	*	*	*	*	*	*					*	*		
17	Lunja Czechowska	Modigliani	*	*		*	*	*	*	*	*			*					
18	Woman Knitting	Metzinger	*	*		*	*	*	*	*	*	*	*						
19	War	Rousseau	*	*	*	*	*	*	*	*	*	*	*			*	*	*	
20	Aunt Sally's	Rouault	*	*	*	*	*	*	*	*	*	*		*	*				

\*indicates the presence of characteristic in slide named.



FIGURE IV

## CATEGORIES, CODE AND SCORE RANGE OF THE TAXONOMY

CRITICAL PROCESS LEVEL	No.	CODE	CATEGORY	SCORE RANGE
DESCRIPTION	1	Lo	Location	0-1
	2	D	Direction	0-1
	3	S <sub>d</sub>	Shape	0-1-2-3
	4	C <sub>d</sub>	Colour	0-1-2-3
	5	L <sub>d</sub>	Line	0-1-2-3
	6	Tex <sub>d</sub>	Texture	0-1-2-3
	7	M <sub>d</sub>	Media	0-1-2-3
	8	T <sub>d</sub>	Technique	0-1-2-3
	9	Lit <sub>d</sub>	Literal Meaning	0-1-2-3
	10	NA	Naming Artist	0-1-2-3
	11	NW	Naming Work	0-2-3
	12	NS	Naming Style	0-1-2-3
	13	Con	Contest	0-2-3
FORMAL ANALYSIS	14	RA	Relational Analysis	0+
	15	S <sub>fa</sub>	Shape	0-1
	16	C <sub>fa</sub>	Colour	0-1
	17	L <sub>fa</sub>	Line	0-1
	18	Tex <sub>fa</sub>	Texture	0-1
	19	M <sub>fa</sub>	Media	0-1
	20	T <sub>fa</sub>	Technique	0-1
	21	FA	Formal Aspect	2-3
INTERPRETATION	22	A-P	Anecdote-Poetry	0-1
	23	AD	Affective Description	0-1
	24	Sy	Synthesis	0+
	25	Lit <sub>i</sub>	Literal Meaning	0-1
	26	CM	Conventional Meaning	0-1-2-3
	27	MA	Modal Aspect	2-3
	28	IM	Inferred Meaning	0-1-2-3
EVALUATION	29	A	Affective	0-1
	30	Ev	Evaluation	0-1
		NC	Not Classified	0-1







#### IV. DEVELOPMENT OF INSTRUCTIONAL MATERIALS

Lesson materials were prepared with regard to instructional content, the Critical Process levels at which responses to art works are made, and selection of suitable slides from the works of Pablo Picasso.

##### Instructional Content

All three experimental groups were exposed to the same instructional content, though methods of presentation differed in each group. Objectives in each particular lesson remained the same for all three groups and the visual material to which all three groups were exposed also was constant.

The researcher carefully prepared lessons introducing modern art as an important art form and illustrated with a series of appropriate slides of modern artists' paintings. A following lesson was organized to show the use of definitions and vocabulary in talking about paintings, aided by the use of a series of filmstrips which are part of a collection of twelve strips prepared by Bertram.<sup>72</sup> The core of eight lessons were prepared with a view to eliciting student verbal statements directed toward various aspects and qualities perceived in the slides of Picasso's paintings. The vocabulary introduced was reinforced repeatedly to develop familiarity with the use of terms appropriate to the criticism of paintings. A summary of content appears in APPENDIX B.

##### Critical Process Levels

The focus of lesson planning was the Critical Process levels of Description, Formal Analysis, Interpretation and Evaluation. The objec-

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<sup>72</sup>Anthony Bertram, Art Appreciation (London: Visual Publications Ltd., 1960).



tives, content, activities and materials were thoughtfully structured to emphasize the use of language appropriate to each of the Critical Process levels. Differently-approached lessons were developed for each experimental group in accordance with method of treatment. A sample of an individual lesson for each group containing the same content but varying in method of instruction appears in APPENDIX A.

### Picasso's Works

Slides and filmstrips of Picasso paintings were selected to illustrate specifically aspects and qualities that might be described, analyzed, interpreted or evaluated. Pairing these by subject matter similarity permitted the comparison of similar or contrasting characteristics verbally at each of the Process levels. The paintings selected were largely portraits or figure groupings varying in style.

## V. RATIONALE FOR THE SELECTION OF VISUAL MATERIALS

Justification for the use of selected visual aids is based primarily upon the literature and research concerned.

### Pre-test and Post-test Slides of Modern Paintings

A recent directive<sup>73</sup> from the Junior High Art Department of the Edmonton Public School Board states that one of the best ways to acquaint children with their cultural heritage is through a study of painting, since (1) fine reproductions in the form of slides, films, filmstrips and prints are available, (2) there is no translation problem involved - art is universal, (3) painting is perhaps the most personal art form -

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<sup>73</sup>Edmonton Public School Board, "Junior High Art Curriculum Bulletin," (May, 1967).



speaking in line, form, texture and colour.

Pfeufer<sup>74</sup> observes that children can react strongly to paintings. While they are less apt to pre-judge than adults are, they do realize that a colour is "hot", a movement "violent", a shape "big"; that a work of art can make them feel funny, cruel, or brooding. They further know that a painting takes much effort, its maker must know a great deal, and that it was likely a rather difficult task.

Although investigating at the college level, Frumkin<sup>75</sup> found that in preference rankings of paintings, students more familiar with paintings tended to like all styles, but preferred modern. Five hundred thirty college students were involved in the ranking of thirty paintings.

Mallery<sup>76</sup> reporting on a study of college art courses, felt that lesson material should be limited to a few selected works of art, emphasizing quality, rather than quantity.

#### Bertram's Series of Art Appreciation Filmstrips

This series carefully prepared by Bertram<sup>77</sup> consists of twelve separate filmstrips. Six of these were selected to be appropriate as an introductory lesson to the modern art period. Excellent examples of

<sup>74</sup>James F. Pfeufer, "Calling to the Silence," International Journal of Religious Education XLII (February, 1966), pp. 27-28.

<sup>75</sup>Robert M. Frumkin, "Preferences for Traditional and Modern Painting: An Empirical Study," (Doctor's dissertation, University of Ohio, 1962).

<sup>76</sup>Roy Mallery, "Art Appreciation: The Report of a Study of College Courses," Art Education XV (May, 1962), p. 10.

<sup>77</sup>Bertram, loc. cit.







paintings illustrate the use of various media; line and linear construction; space, volume and tone; movement and colour; content and modern art. Accompanying notes proved helpful in planning lesson material.

### Slides of Picasso's Works

Justification for the use of Picasso's paintings as the central visual material stems from the range of styles and interpretations of subject matter that he has exemplified over his lifetime, paralleling the various 'isms that constitute the modern art period.

Newmeyer has this to say:

One of the chief qualities of modern art is its infinite diversity. The works of Picasso encompass almost the entire range of the period, many of the subdivisions of which he originated or renewed in the image of his individual greatness.<sup>78</sup>

The researcher selected the visual art materials based on the following assumptions:

1. Paintings are preferable to other art forms since they are not altered in two-dimensional reproduction.
2. The group of paintings include most of the qualities and aspects which an artist considers as he produces a work of art.
3. Modern paintings offer more stylistic, subject matter and technical variety than painting in any other comparable art period.
4. Modern masters have explored the world of expression in free variations using distortion purposefully.

## VI. DESCRIPTION OF THE INSTRUMENTS

### The Lorge-Thorndike Intelligence Test

The Lorge-Thorndike Intelligence Tests<sup>79</sup> are group tests which

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<sup>78</sup>Sarah Newmeyer, Enjoying Modern Art (New York: Reinhold Publishing Company, 1955), p. 9.

<sup>79</sup>Irving Lorge and Robert L. Thorndike, "Lorge-Thorndike Intelligence Test," Canadian Multiple-Level Edition, Form 1 - Verbal Scale (Toronto: Thomas Nelson and Sons Ltd., 1967).



are divided into two parts. The tests are available in five levels, each level having two equivalent forms, Form A and Form B.

The Verbal Battery is made up of subtests which use only verbal items. They provide an index of scholastic aptitude. This battery correlates quite highly with three well-known group tests of intelligence, with coefficients of .77, .79 and .84.<sup>80</sup>

#### Wilson Aspective Perception Test

Wilson<sup>81</sup> developed a taxonomy of categories in order to classify the verbal responses which describe perception of paintings. He developed his instrument based on this taxonomy to measure an individual's perception of paintings through an analysis of verbal descriptions. He then administered his instrument to groups with different characteristics to determine the perceptual modes they use in the perception of paintings.

His taxonomy is structured so that it reflects the individual's mode of describing and judging paintings and the qualities and aspects which the paintings exhibited. The taxonomy classifies aspects of how an individual describes and judges paintings and what aspects he directs his attention toward. In order to refine and extend observation of language about perception used by an individual perceiving paintings, the taxonomy was constructed by adapting categories from other classifications such as inkblot tests, and students' and children's responses to paintings. Following pilot studies and further revision and evaluation, a proposed set of categories was established.

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<sup>80</sup>Ibid., Examiner's Manual, p. 14.

<sup>81</sup>Brent Wilson, op. cit.



Wilson further refined his taxonomy to distinguish between individuals who perceived paintings in a customary manner (using only a few categories) and those who viewed paintings in an aspective manner (using many more categories). It was also necessary that Wilson structure his taxonomy objectively so that no two or more categories accounted for the same aspect and that no ambiguity between categories occurred. Simplicity of terminology to designate categories facilitated scorers' marking.

The Judgmental Response Mode categories relate to placement of value or indicating the worth of a painting by explaining whether it is liked or disliked, good or bad. The Individual Response Mode categories direct attention to the individual to classify the methods and strategies he uses in describing paintings. The Aspects of Art Works categories classify the qualities and aspects in a painting that are viewed by the perceiver. The taxonomy appears in FIGURE II.

Wilson developed a scoring system on a four-point scale so that each category yields a separate score. He carefully selected thirty-four paintings to include the work of well-known artists and displaying the widest possible variety of qualities and aspects.

He validated his test by administering, scoring and analyzing the responses of populations selected from the fifth, seventh, ninth, high school and senior college levels. He also tested reliability of scorers and found correlations high. He tested his instrument in an experimental study in which he attempted to alter fifth and sixth grade students' responses to paintings. He found that significant differences at the .05 level existed between control and experimental groups' use of half of his categories. For some of the other categories possibly no







perceptual alterations resulted from the particular experimental treatment he employed.

## VII. THE EXPERIMENTAL TREATMENTS

All three experimental groups had been arranged heterogeneously within groups by achievement and sex in September, 1967 by administrative staff at the researcher's school according to routine assignment of pupils to classes. The three groups under investigation were homogeneous among groups with respect to intelligence, the mean IQ's being 113 as measured by the Lorge-Thorndike Verbal Scale at the sixth-grade level.

The objectives, content and visual materials were the same for all three experimental groups; however, both teacher and student activities differed in accord with the definitions of the methods employed. Essentially, the Formal group (Group 1) received lecture-type instruction with few questions asked by the class and little discussion involved. The Functional group (Group 2) engaged in free discussion of teacher-prepared questions. The Informal group (Group 3) was given major problems about which they asked questions of the teacher and among themselves as a means for stimulating discussion. A sample lesson reflecting the same content for each experimental group is found in APPENDIX A. Summaries of lessons presented to each of the groups are found in APPENDIX B. A model of the experimental design appears in FIGURE V.



FIGURE V  
MODEL OF THE EXPERIMENTAL DESIGN

TIME	CONTENT	METHODS OF INSTRUCTION		
First Week	PRE-TEST			
Eight 50- Minute Lessons in Four Weeks	Critical Process Levels of:  DESCRIPTION FORMAL ANALYSIS INTERPRETATION EVALUATION	FORMAL  Group 1  N = 26	FUNCTIONAL  Group 2  N = 26	INFORMAL  Group 3  N = 26
Last Week	POST-TEST			



### VIII. SUMMARY

Three grade seven classes in an Edmonton junior high school were administered a pre-test during the week prior to the experiment, subjected to the same instructional content and materials but under different instructional methods for the next five weeks, and finally administered a post-test during the seventh week. Lessons revolved around critical talk about paintings featuring largely the work of Pablo Picasso. Pre-tests and post-tests involved the use of the same twenty slides of modern paintings and responses to these paintings provided data for analysis and determination of the outcomes of the study.





## CHAPTER IV

### COLLECTION OF DATA AND DESCRIPTION OF STATISTICAL PROCEDURES

#### I. ADMINISTRATION OF WILSON TEST AS PRE-TEST AND POST-TEST

Members of the three experimental groups were given specially prepared booklets in which to write their statements. Only right-hand pages were used, the left being reserved for the convenience of scoring. Students were told to write in any manner they wished what they saw or thought about as many aspects of the slides presented as possible. The instructions given (the same as the directions in Wilson's study) appear in APPENDIX C.

A single administration session was not sufficient to write responses to twenty slides, therefore the test was divided into two parts. All three groups were given five minutes in which to write their reactions to each slide in the pre-test. This was more time than necessary since nearly everyone was finished writing by the time the next slide came into view. However, in the post-test, the optimum time for writing about each slide for all groups approached ten minutes. Basically, every attempt was made to give each individual all the time he required to complete his statements.

To what extent the time factor affected scores of the members who could not finish writing is, of course, unknown. However, every effort was made to make all testing and timing situations as nearly comparable as possible. Where additional time was necessary, time-tabling was arranged suitably through administrative channels. The room was kept dark enough to render quality images on the screen and to allow sufficient visibility



for writing responses as well.

Test booklets were identifiable by student number only so that anonymity would be assured. Both the pre-tests and the post-tests were scored following the five-week experimental treatment in order that pre-test scores would not influence instructional methods.

## II. CONSIDERATION OF PERSONNEL FOR SCORING

The Wilson study employed highly-trained scorers. However, this researcher decided that a measure of consistency would be achieved in scoring all responses by himself, provided that certain precautions were taken:

1. A practice session was established to become familiar with identification of the proper categories, their scope and the scores to be awarded. This was done by scoring three hundred separate responses obtained from a non-participating class of thirty students who wrote statements about ten randomly-selected slides. The researcher thus gained a degree of facility, a measure of certainty and some breadth in scoring these samples.

2. The numbered sets of both pre-test and post-test booklets were randomly arranged in ten separate bundles from which each booklet was taken in random order. Thus groups, members and type of test were inter-mixed.

3. Anonymity was maintained by identifying each booklet by number corresponding to names of members of the groups.

4. Partiality was eliminated by withdrawing booklets face down from bundles so that there could be no tendency to associate an identification number with either a group, member or type of test.



5. As strict adherence as possible to the Wilson Directions for Scoring Manual was a foremost consideration.

### III. SCORING PROCEDURE

The entire student's response to a particular slide was read once by the researcher carefully, then analyzed for category placement and scoring. A later, though more cursory, check on scoring was done before totals were entered on a master tabulation sheet. Any minor adjustments deemed necessary were made at that time.

Whether a complete response or a portion thereof was "right" or "wrong" in terms of the aspects and qualities of a particular painting was not considered to be a factor, since how individuals responded, what they directed their attention toward and at which critical process level their statements were judged to be made, constituted intelligent talk about paintings.

The two types of categories in the Wilson Test, Individual Response Mode and Aspects of Art Works, were distributed among the four Critical Process levels of this study as shown in FIGURE IV.

#### Scoring Response Mode Categories

Generally, in order to score several of the Response Mode Categories, it was deemed sufficient only to note their presence or absence in a response. These categories were scored on a two-point scale -- 0 for no use of the category; 1 point for use of the category. Location and Direction at the Description level; Shape, Colour, Line, Texture, Media and Technique at the Formal Analysis level; Anecdote-Poetry, Affective Description and Literal Meaning at the Interpretation level; and Affective and Evaluation at the Evaluation level were all scored in this manner.







However with Relational Analysis and Synthesis a recording of each instance beyond mere presence or absence of a category afforded a better indication of a student's manner of responding. These two were scored 0, 1, 2 or more points.

### Scoring Aspects of Art Works Categories

Scoring of the categories related to Aspects of Art Works was treated differently. In these instances importance was also attached to the use of these categories as they related to others in a response. They were scored on a four-point scale from 0 to 3. A score of 0 points was awarded where the category was not used. A score of 1 point was given where the category was used, but only secondarily as an elaboration or qualification of another category, such as "green" in "a green shape." A score of 2 points was given where the category was primary in the response, but where at least one other primary category was present; for example, both "green" and "shape" are primary in "a green shape." A score of 3 points was given where the category was primary to the response, but other categories were used as elaboration or qualification or not used at all; for example, in "a green shape", "shape" is considered primary.

The following categories were scored without regard for other categories: Shape, Colour, Line, Texture, Media, Technique, Literal Meaning, Naming Artist, Naming Style at the Description level; Conventional Meaning and Inferred Meaning at the Interpretation level. Frequency of occurrence was not a factor in the scoring of these Aspects of Art Works categories. Whether mentioned once or many times in a single response, a category received the same score.



The following categories did not have a point rating of 1, since they would not be used as an elaboration or qualification of some other category: Naming Work, 0, 2 or 3 points; Context, 0, 2 or 3 points; Formal Aspect, 2 or 3 points; Modal Aspect, 2 or 3 points. Any responses which could not be classified in any of the preceding classes were designated Not Classified and scored 0 or 1 point. Spelling or grammatical construction did not influence scores.

APPENDIX D contains samples of students' responses and the manner in which they were scored. Following the scoring of all responses in the pre- and post-test written by members of all three groups, point totals for each category were entered on Master Tabulation sheets and grand totals determined for each member for each of the four Critical Process levels. These appear in APPENDIX E.

#### IV. STATISTICAL PROCEDURE FOR ANALYSIS OF DATA

Data concerning individual student code number, experimental group, sex, IQ, totals for each of the Critical Process levels and totals for all the levels for each of the pre-test and post-test were placed on IBM Fortran cards.

The Analysis of Covariance was the statistical technique selected to provide a means of obtaining a measure of the achievement of the sample in the study. The analytical process was carried out by the I.B.M. computer in the Division of Educational Research, Faculty of Education at the University of Alberta. This statistic was used to test all of the Null Hypotheses. The tables relating to the testing of these hypotheses include both the unadjusted and the adjusted mean scores on the post-test.





The adjusted mean is the mean square as it has been altered after equating the treatment groups on the pre-test. This removal of potential sources of bias follows the design suggested by Winer.<sup>82</sup>

A one-way analysis of covariance was performed on Null Hypothesis 1 and its Sub-hypotheses. The fixed factor was the method of instruction at three levels (Formal, Functional, Informal) while the random factor levels were the four Critical Process levels analyzed one at a time and also the total of all four. The tables include the source of variance, that is, the "between" group and the "within" group variance, the degrees of freedom, the mean square, the adjusted F value and the probability. The F value is the obtained ratio of the mean square for "between" group variance to the mean square for the "within" group variance.

The analysis of covariance conducted for Hypotheses 2 and 3 was a 2 x 3 factorial analysis. The row fixed factor was the Method of Instruction at three levels, while the column fixed factor was Sex at two levels in one instance and IQ at two levels in the other case.

## V. ACCEPTABLE LEVELS OF SIGNIFICANCE FOR STATISTICAL DATA

Researchers are not all in agreement on the level of significance which is appropriate for a given test. Winer states that "too much emphasis has been placed upon the level of significance of a test."<sup>83</sup> The most frequently employed levels are the .05 and .01 in educational research. In all but one test of significance in this study the .01 level

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<sup>82</sup>B. J. Winer, Statistical Principles in Experimental Design (Toronto: McGraw-Hill Book Co., 1962), pp. 577-604.

<sup>83</sup>Ibid., p. 12.





was used indicating a high level of certainty. Critical F values were obtained from Winer.<sup>84</sup>

## VI. SUMMARY OF COLLECTION OF DATA AND STATISTICAL PROCEDURES

Modification of the number of slides and the scoring categories was necessary to adapt the Wilson Aspective Perception Test to the requirements of this study if it was to be used as a sensitive evaluative instrument. The administration of the instrument as both a pre- and post-test was discussed. A rationale was established for the researcher's scoring procedure and this procedure was generally outlined. Finally, the statistical procedure for analyzing data was clarified, and the level of statistical significance at which the hypotheses were accepted or rejected was presented.

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<sup>84</sup>Ibid., p. 646.



## CHAPTER V

### ANALYSIS OF DATA AND FINDINGS

This chapter presents the analyses of data from the testing of 78 students who had been subjected to three different methods of instruction in how to talk intelligently about paintings. The significance of the differences between mean scores on the pre-test and post-test was calculated by an I.B.M. computer. The seven tables in this chapter present summary information appropriate to the testing of the hypotheses of this study.

#### I. STATEMENT OF HYPOTHESES

The Major Null Hypothesis was drawn up from the primary purpose of this investigation.

Major Null Hypothesis. There is no significant difference in students' critical talk about paintings among groups who have received differentiated instruction over a five-week period of time.

The null hypotheses to be tested were:

Hypothesis 1. There is no significant difference in mean gains among groups on the Wilson Aspective Perception Test scores of the four Critical Process levels of talk about paintings.

Sub-Hypotheses of 1. There is no significant difference in mean gains among groups on the Wilson Aspective Perception Test scores for each of the following Critical Process levels of talk about paintings:

- a) Description
- b) Formal Analysis
- c) Interpretation
- d) Evaluation

Hypothesis 2. There is no significant difference in mean gains on the Wilson Aspective Perception Test scores between boys and girls for the four Critical Process levels of talk about paintings.



Hypothesis 3. There is no significant difference in mean gains on the Wilson Aspective Perception Test scores between students who have High IQ and students who have Low IQ for the four Critical Process levels of talk about paintings.

## II. ANALYSIS OF DATA

TABLE I

ANALYSIS OF COVARIANCE OF MEAN GAINS AMONG GROUPS 1, 2 AND 3  
ON THE WILSON ASPECTIVE PERCEPTION POST-TEST  
SCORES OF THE FOUR CRITICAL PROCESS LEVELS

Group	Unadjusted Mean	Adjusted Mean
1. Formal	121.92	121.70
2. Functional	242.23	245.95
3. Informal	163.08	159.58

  

Source	df	Mean Squares	Adjusted F	P
Group	2	103895.19	41.73	0.000
Within	74	2489.70		

## HYPOTHESIS 1

There is no significant difference in mean gains among groups on the Wilson Aspective Perception Test scores of the four Critical Process levels of talk about paintings.

## Results

To indicate a significant difference in mean gains among groups at the .01 level of confidence an F-value of 4.93 would be required. An examination of Table I reveals the adjusted F-value obtained is 41.73.





Thus the experimentally obtained F-value greatly exceeds the F-value required for significance at the .01 level.

### Discussion

The data indicate there are significant differences in mean gain total scores on the post-test among groups after adjustment had been made in order to equate groups on the pre-test. The effect of treatment was such that there are highly significant differences among the Formal, Functional and Informal methods of instruction in the total Critical Process levels of talk about paintings. The probability that this difference would occur by chance is very small, viz.  $P = 0.000$ .

### Conclusion

Null Hypothesis 1 was rejected.

TABLE II

ANALYSIS OF COVARIANCE OF MEAN GAINS AMONG GROUPS 1, 2 AND 3  
ON THE WILSON ASPECTIVE PERCEPTION POST-TEST SCORES  
OF THE CRITICAL PROCESS LEVEL DESCRIPTION

Group	Unadjusted Mean	Adjusted Mean
1. Formal	84.46	83.61
2. Functional	158.08	160.47
3. Informal	116.38	114.84

  

Source	df	Mean Squares	Adjusted F	P
Group	2	37658.50	37.80	0.000
Within	74	996.19		



### HYPOTHESIS 1 (a)

There is no significant difference in mean gains among groups on the Wilson Aspective Perception Test scores of the Critical Process level "Description".

#### Results

To indicate a significant difference in mean gains among groups at the .01 level of confidence an F-value of 4.93 would be required. An examination of Table II reveals the adjusted F-value obtained is 37.80. The experimentally obtained F-value greatly exceeds the F-value required for significance at the .01 level.

#### Discussion

The results indicate there are significant differences in mean gain scores on the post-test among groups following adjustment by equating scores on the pre-test. The high adjusted F-value indicates that the differences among the Formal, Functional and Informal groups are highly significant statistically, showing that there is a difference among the methods used to instruct groups how to talk intelligently about paintings at the Descriptive level.

Examination of the adjusted means shows that the Functional group obtained the highest mean scores and the Formal group obtained the lowest mean gain scores.

#### Conclusion

The probability that these differences would occur by chance is exceedingly small, since  $P = 0.000$ .

Null Hypothesis 1 (a) is therefore rejected.



TABLE III

ANALYSIS OF COVARIANCE OF MEAN GAINS AMONG GROUPS 1, 2 AND 3  
ON THE WILSON ASPECTIVE PERCEPTION POST-TEST SCORES  
OF THE CRITICAL PROCESS LEVEL FORMAL ANALYSIS

Group	Unadjusted Mean	Adjusted Mean
1. Formal	14.15	13.76
2. Functional	46.31	47.67
3. Informal	18.08	17.10

  

Source	df	Mean Squares	Adjusted F	P
Group	2	8724.32	28.14	0.000
Within	74	310.03		

#### SUB-HYPOTHESIS 1 (b)

There are no significant differences in mean gains among groups on the Wilson Aspective Perception Test scores of the Critical Process level of talk about paintings "Formal Analysis".

#### Results

To show significant differences in mean gains among groups at the .01 level of confidence an F-value of 4.93 would be required. Table III shows the F-value obtained to be 28.14, which greatly exceeds the F-value required for significance at the .01 level. A very low probability level is evident.

#### Discussion

The data indicate there are highly significant differences in mean gain scores on the post-test among groups following adjustment in order to





equate scores on the pre-test. The relatively high adjusted F-value obtained indicates the differences among the Formal, Functional and Informal group scores are highly significant. Examination of the adjusted mean shows that the Functional group obtained the highest mean gain scores, while the Formal group made the lowest mean gain scores. This may be interpreted to mean that there is a difference in the methods used to instruct groups in how to talk about paintings intelligently at the level of Formal Analysis.

### Conclusion

The probability of these differences occurring by chance is very small since  $P = 0.000$ .

The Null Hypothesis 1 (b) was therefore rejected.

TABLE IV

ANALYSIS OF COVARIANCE OF MEAN GAINS AMONG GROUPS 1, 2 AND 3  
ON THE WILSON ASPECTIVE PERCEPTION TEST SCORES  
OF THE CRITICAL PROCESS LEVEL INTERPRETATION

Group	Unadjusted Mean	Adjusted Mean
1. Formal	22.92	23.54
2. Functional	24.58	24.43
3. Informal	23.81	23.33

  

Source	df	Mean Squares	Adjusted F	P
Group	2	8.83	.073	0.929
Within	74	120.47		



### SUB-HYPOTHESIS 1 (c)

There are no significant differences in mean gains among groups on the Wilson Aspective Perception Test scores of the Critical Process level of talk about paintings "Interpretation".

#### Results

To indicate significant differences in mean gain scores among groups at the .01 level of confidence an F-value of 4.93 would be required. Table IV reveals the adjusted F-value obtained is .073, which is below the required F-value of 4.93. A very high probability level exists.

#### Discussion

The results indicate there are no significant differences in mean gain scores on the post-test among groups after equating adjustment had been made. The relatively low adjusted F-value obtained indicates there are no statistically significant differences in mean gains among the Formal, Functional and Informal groups with respect to ability to talk about paintings at the level of Interpretation. There are no differences among methods used to instruct groups at this Critical Process level.

#### Conclusion

The probability of these differences occurring by chance is large since  $P = 0.929$ .

The Null Hypothesis 1 (c) was accepted.

### SUB-HYPOTHESIS OF 1 (d)

There are no significant differences in mean gains among groups on the Wilson Aspective Perception Test scores of the Critical Process level of talk about paintings "Evaluation".

#### Results

To show significant differences in mean gains among groups at the .01 level of confidence an F-value of 4.93 would be needed. An examination



of Table V reveals that the adjusted F-value obtained is 33.17, which exceeds the required F-value for .01 level significance. A very low probability level is evident.

TABLE V

ANALYSIS OF COVARIANCE OF MEAN GAINS AMONG GROUPS 1, 2 AND 3 ON THE WILSON ASPECTIVE PERCEPTION POST-TEST SCORES OF THE CRITICAL PROCESS LEVEL EVALUATION

Group	Unadjusted Mean	Adjusted Mean
1. Formal	.58	.74
2. Functional	13.27	12.55
3. Informal	4.81	5.36

  

Source	df	Mean Squares	Adjusted F	P
Group	2	846.51	33.17	0.000
Within	74	25.52		

### Discussion

The results indicate there are significant differences in mean gain scores on the post-test among groups. The relatively high adjusted F-value obtained indicates the differences among the Formal, Functional and Informal group scores for Evaluation are highly significant. The adjusted means show that the Functional group obtained the highest mean scores, while the Formal group obtained the lowest mean scores. This is interpreted to mean that there are differences among the methods used to instruct groups in how to talk intelligently about paintings at the level of Evaluation.







### Conclusion

The probability of these differences being due to chance occurrence is extremely small since  $P = 0.000$ .

The Null Hypothesis 1 (d) is therefore rejected.

TABLE VI

ANALYSIS OF COVARIANCE OF MEAN GAINS BETWEEN BOYS AND GIRLS ON THE WILSON ASPECTIVE PERCEPTION POST-TEST SCORES OF THE FOUR CRITICAL PROCESS LEVELS

Source	Sum of Squares	df	Mean Squares	F	P
Method	141781.50	2	70890.75	38.14	0.000
Sex	14906.13	1	14906.13	8.02	0.006
Method X Sex	9155.25	2	4577.63	2.46	0.094
Error	109676.87	59	1858.93		
Adjusted Means					
Boys                  Girls					
1. Formal				118.27	
2. Functional				231.79	
3. Informal				163.76	
	156.19		186.35		

### HYPOTHESIS 2

There is no significant difference in mean gains on the Wilson Aspective Perception Test scores between boys and girls for the four Critical Process levels of talk about paintings.

Since there were unequal numbers of boys and girls in each group



and the N in cells of the analysis of covariance statistic must be balanced, the required number of students were selected by a random procedure. Using the specified tables of random numbers in Senders<sup>85</sup> 11 boys and 11 girls in each group were chosen to be included in the analysis of mean gains between boys and girls on the Wilson post-test scores of the total Process levels. A total of twelve students were omitted from all the groups. The groups were thus balanced by sex. A summary of the random procedure and its results appears in APPENDIX F.

- a) Analysis of the Effect of Method of Instruction on the Wilson Aspective Perception Test scores obtained by the Balanced groups for the total Critical Process levels.

### Results

To indicate a significant difference in mean gains among balanced groups at the .01 level of confidence an F-value of 4.99 would be needed. An examination of Table VI reveals the adjusted F-value obtained is 38.14. This exceeds substantially the required F-value at the .01 level. A very low probability is noticeable.

### Discussion

The data indicate there are significant differences in mean gains on the post-test scores among the balanced groups. The relatively high F-value obtained indicates the differences among the balanced Formal, Functional and Informal group scores of the four Critical Process levels are highly significant. Examination of the adjusted means shows that

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<sup>85</sup>Virginia L. Senders, Measurement and Statistics (New York: Oxford University Press, 1958).



the Functional group obtained the greatest mean gains, the Informal group followed and the Formal group obtained the least gains.

### Conclusion

This finding corroborates the rejection of Hypothesis 1.

- (b) Analysis of Mean Gains between Boys and Girls in the Balanced Groups on the Wilson Aspective Perception Post-test Scores of the Total Critical Process Levels

### Results

To indicate a significant difference in mean gains between boys and girls at the .01 level of confidence an F-value of 7.09 would be required. Table VI reveals the adjusted F-value obtained is 8.02, which exceeds the 7.09 required for significance at .01. The probability level of 0.006 is quite low.

### Discussion

The data indicate there is a significant difference in mean gains on the post-test scores between boys and girls. There is a significant difference between the sexes in their adjusted post-test scores of the four Critical Process levels, the adjusted means for girls being greater than the adjusted means for boys. The probability that this difference would occur by chance is very small. It appears that girls are better able than boys to talk intelligently about paintings.

### Conclusion

Null Hypothesis 2 was rejected.







c) Analysis of the Interaction Effect of Method of Instruction  
and Sex of Student

Results

The critical value for a test of significance at the .05 level on the Method by Sex interaction effect is  $F_{.95} (2, 59) = 3.15$ . Referral to Table VI indicates the adjusted F-value obtained is 2.46. Thus the obtained value is less than required for a confidence level of .05. The probability level is approximately 0.1.

Discussion

Results show that the interaction of Method by Sex is not significant at the .05 level.

Conclusion

The relative effectiveness of the three methods of instruction did not depend on the sex of the students in the three groups.

### HYPOTHESIS 3

There is no significant difference in mean gains on the Wilson Aspective Perception Test scores between students who have High IQ and students who have Low IQ for the four Critical Process levels of talk about paintings.

a) Analysis of the Effect of Method of Instruction on the  
Post-test Scores of the High IQ and Low IQ groups

Results

To indicate a significant difference in mean gains among groups at the .01 level of confidence an F-value of 4.95 is required. Table VII shows the adjusted F-value obtained to be 42.68, which greatly exceeds the F-value needed at the .01 level. A very low probability level exists.



TABLE VII

ANALYSIS OF COVARIANCE OF MEAN GAINS BETWEEN HIGH IQ AND LOW IQ STUDENTS  
ON THE WILSON ASPECTIVE PERCEPTION POST-TEST SCORES OF THE  
FOUR CRITICAL PROCESS LEVELS

Source	Sum of Squares	df	Mean Squares	F	P
a) Method	205203.56	2	102601.75	42.68	0.000
b) IQ	8838.19	1	8838.19	3.68	0.059
c) Method X IQ	4586.38	2	2293.19	.95	0.390
Error	170696.12	71	2404.17		

  

Adjusted Means	
High IQ	Low IQ
1. Formal	121.73
2. Functional	245.45
3. Informal	160.05
186.70	164.79

### Discussion

The results indicate there are significant differences in mean gains on the post-test scores among groups after adjustment had been made in order to equate pre-test scores. The relatively high F-value obtained indicates the differences among the Formal, Functional and Informal groups as divided into High IQ and Low IQ are highly significant. The adjusted means in Table VII indicate the Functional group obtained the greatest mean gains, the Informal group was next and the Formal group made the lowest mean gain scores on the total Critical Process levels.



### Conclusion

This finding corroborates the rejection of Hypothesis 1.

- b) Analysis of the Effect of IQ on the Post-test Scores of the Wilson Aspective Perception Test for the Total Critical Process levels of Talk about Paintings

### Results

To indicate a significant difference between High IQ and Low IQ mean gain scores at the .05 level of confidence an F-value of 3.99 would be necessary. In table VII the F-value obtained is 3.68. Thus the obtained F-value is less than that required. The probability is about 6% that this observable difference occurs by chance.

### Discussion

The data indicate that there is no significant difference in mean gains on the post-test scores between High IQ and Low IQ students. There appears to be no observable difference in the abilities of High IQ students as compared with Low IQ students to talk intelligently about paintings.

### Conclusion

Null Hypothesis 3 was accepted.

- c) Analysis of the Interaction Effect of Method of Instruction and Level of IQ

### Results

The critical value for a .05 level test of significance on the Method by IQ interaction effect is  $F_{.95}(2, 71) = 3.14$ . Table VII indicates the adjusted F-value obtained is 0.95. Thus this is less than the required 3.14 value for a .05 level of confidence. The probability level is approximately 0.4.





### Discussion

Results show that the interaction of Method and IQ is not significant at the .05 level of confidence.

### Conclusion

The relative effectiveness of the methods of instruction does not depend on the level of IQ of the students in the experimental groups.

## III. SUMMARY

This chapter has presented statistical analyses of the experimental data, discussion of results and conclusions for each of the hypotheses tested.

In order to facilitate a comparative study of relative effectiveness of methods of instruction and significance of differences in mean gain scores, summaries of results are given in Tables VIII and IX.

TABLE VIII

### SUMMARY OF RESULTS

SIGNIFICANCE OF DIFFERENCES IN MEAN GAIN SCORES\*  
AMONG OR BETWEEN EXPERIMENTAL GROUPS

NULL HYPOTHESIS Number	Groups	CRITICAL PROCESS LEVELS				
		Desc.	Formal Analysis	Interp.	Eval.	Total
1	1,2,3					S
1 (a)	1,2,3	S				
1 (b)	1,2,3		S			
1 (c)	1,2,3			NS		
1 (d)	1,2,3				S	
2	Sex					S
3	IQ					NS

\*Measured by adjusted post-test scores on Wilson Test

S Significant Differences

NS No significant Differences



TABLE IX  
SUMMARY OF RESULTS  
RELATIVE ACHIEVEMENT IN MEAN GAIN SCORES\*  
AMONG OR BETWEEN EXPERIMENTAL GROUPS

GROUPS	CRITICAL PROCESS LEVELS				
	Descrip- tion	Formal Analysis	Interp- retation	Evaluation	Total
Formal	3	3	NS	3	3
Functional	1	1	NS	1	1
Informal	2	2	NS	2	2
Boys					3
Girls					1
High IQ					NS
Low IQ					NS

\*Measured by adjusted post-test scores on Wilson Test

- NS No significant difference
- 1 Greatest relative gain
- 3 Least relative gain
- 2 Relative gain "in Between" 1 and 3



## CHAPTER VI

### SUMMARY OF FINDINGS, INTERPRETATIONS, CONCLUSIONS AND RECOMMENDATIONS

#### I. STATEMENT OF THE PROBLEM

The purpose of this study was to determine the relative effectiveness of three methods of instruction, Formal, Functional and Informal, in altering the abilities of three classes of seventh grade students to Describe, Analyze, Interpret and Evaluate modern paintings. Differences in sex and IQ were also investigated.

#### II. HYPOTHESES

In this study, hypotheses were tested using statistical procedures concerning the achievement of three comparable groups of students subjected to three different kinds of instruction in how to describe, formally analyze, interpret and evaluate modern paintings. Briefly, the null hypotheses tested involved determining significant differences in mean gains on the Wilson Aspective Perception Test scores:

Hypothesis 1.            among Formal, Functional and Informal groups for the total Critical Process levels.

Sub-Hypothesis 1.    among Formal, Functional and Informal groups for

- (a) Description
- (b) Formal Analysis
- (c) Interpretation
- (d) Evaluation

Hypothesis 2.            between boys and girls for the total Critical Process levels.

Hypothesis 3.            between High IQ and Low IQ students for the total Critical Process levels.





### III. SUMMARY OF FINDINGS

To avoid differences among or between groups of students due to chance or errors in sampling, the treatment of data in testing the null hypotheses in this study was considered to be statistically significant only if the F-value obtained attained or exceeded the .01 level of confidence. In two instances, the interaction effect of Method and Sex and the effect of IQ, the .05 level of confidence was considered as being acceptable but the F-value in either case was not attained.

In general, the major findings of the study are:

1. The most noticeable outcome was the over-all achievement in mean gain scores of the three experimental groups as measured by the Wilson Aspective Perception Test.
2. The adjusted mean gain scores indicate that the Functional group obtained the greatest total gains in the four Critical Process levels, while the Formal group obtained the least total gain scores.
3. For Description, the least difficult Critical Process level, the adjusted means indicate the Functional group obtained the greatest mean gains, while the Formal group obtained the least mean gains.
4. For Formal Analysis, the next higher Process level, the adjusted mean scores indicate the Functional group made the greatest gains, while the Formal group obtained the least gains.
5. For Interpretation, the third level of difficulty, differences among Formal, Functional and Informal groups were not significant.
6. At the highest level of difficulty, Evaluation, the adjusted means indicate the Functional group again obtained the greatest gains, while the Formal group again made the least gains.



7. The Functional group, except at the level of Interpretation, exhibited superiority in achievement consistently and the Formal group exhibited the least achievement consistently. This is shown by reference to:

- (a) Each of the Critical Process levels independently (except for Interpretation ).
- (b) The over-all total of the four Critical Process levels for the total sample (N = 78).
- (c) The over-all total of the four Critical Process levels for the Sex sample (N = 66).
- (d) The over-all total of the four Critical Process levels for the IQ sample (N = 78).

8. There was a significant difference between boys and girls in mean gain scores on the total Critical Process levels. The adjusted means in the analysis of the effect of Sex indicate a higher degree of achievement by girls than boys.

9. Neither IQ group, High or Low, achieved any better than the other, there being no significant difference between their mean gain scores on the total Critical Process levels. At a less stringent level of confidence, .09, the High IQ group would appear to achieve better than the Low IQ group.

#### IV. INTERPRETATIONS OF FINDINGS

The Functional method of instruction must be considered superior to the Formal method with respect to what is considered in this study as intelligent talk about paintings when the perceptive abilities of seventh-grade children are involved. The Functional approach takes cognizance of the high level of student enthusiasm at this grade level, stimulating





their interest by thoughtful questioning and discussion. The freedom to voice their own opinions about what they perceived, the opportunity to share their visual experiences with class-mates, the motivation to react critically to organized questioning afford situational learning that is both challenging and satisfying to young adolescents. The Functional group progressively enters into more discussion as they find that widening experience enables them to see more aspects in the slides of paintings presented. Thus, they are better able to verbalize in an intelligent manner about what they see and think about paintings, reflecting an increasing understanding of works of art as assessed in this study.

It might very well be that the difference between the Functional and Informal approaches is not significant, or that the difference between the Informal and Formal methods is not significant. However, adjusted means did indicate the Informal group achieved mid-way between the scores obtained by the other two groups at all levels except Interpretation. These relatively modest gains suggest that the Informal approach was instrumental in improving the abilities of that group to criticize paintings intelligently.

Non-significant differences among the groups at the Interpretation level might be explained by the difficulty that students would have in attempting to explain, find the meaning of, or interpret paintings considering their limited experience in this regard. A two-lesson instruction period devoted to Interpretation is hardly sufficient training to become proficient to any degree at perceptions involved in this more difficult level of criticism. As stated earlier, Feldman<sup>86</sup>

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<sup>87</sup>Feldman, op. cit.





regards Interpretation as nearly as difficult a critical process as Evaluation.

Though the Critical Process level of Evaluation is considered the most difficult, students were more readily able to state whether they liked a painting or disliked it, whether it was good or bad, with simple reasons why they did or did not. Thus they tended to exhibit greater gains in Evaluative than Interpretive discourse. Furthermore, higher scores on Evaluation might be attributable to requirements of the Wilson Test that criteria for evaluation need not be complex.

The Informal method, using a self-discovery approach, permitted students to discuss largely among themselves what they saw or thought about the slides they viewed. Though discussion often became tangential, there were benefits in the free expression and permissive atmosphere which prevailed.

The Formal method, reflected in the relatively small gains made by the group of students appears to offer little that is conducive to the development of greater understanding of paintings. The authoritarian atmosphere permits almost no discussion, a desirable element in appreciative learning as this study points out. Passivity does not encourage sharing of ideas. To criticize art means to talk about it, to become involved actively and rationally. A lecture-type approach in the area of critical talk appears to be inferior to discussion methods.

The two discussion methods, the Informal and particularly the Functional merit attention in secondary school classrooms offering an appreciation program in critical talk about paintings. Discussion of teacher-prepared questions and inquiry by discussion appear to be fruitful



methods in instructing early junior high school students in how to talk and look at paintings.

The higher degree of achievement of girls than boys in talking about paintings may be due to the tendency of girls to converse more freely, be somewhat more open-minded, inquisitive and perhaps more interested in artistic pursuits. Findings with respect to these characteristics have been reported in the review of research of Grambs and Waetjen<sup>88</sup>, and Minuchin<sup>89</sup>.

It is somewhat surprising to note that the High IQ group did not achieve better than the Low IQ group. A difference would be expected since there is clearly a positive relationship between an individual's intelligence and his ability to express himself verbally. One might expect his vocabulary to be better than the storehouse of concepts which a student of lower IQ might possess. However, there may be appreciative abilities or factors which are operative in describing, analyzing, explaining and judging art works which are not closely related to intelligence. There may also be a hierarchy within each of the four Process levels, so that a High IQ student may have progressed from a high to a higher level of talk about paintings while gaining no more than a Low IQ student improving his ability to talk critically at a much lower level.

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<sup>88</sup>Grambs and Waetjen, op. cit.

<sup>89</sup>Minuchin, op. cit.





## V. CONCLUSIONS

It appears that if it is desirable to improve students' abilities to talk intelligently about modern paintings, then our present approaches of incidental learning must necessarily give way to more concentrated methods in that direction. If criticism, or intelligent talk about art, is to become a worthwhile undertaking in the increasingly aesthetic-oriented art education of to-day's school child, then teaching methods whereby discussion among students and teachers is paramount must be considered important. The Functional method's superiority in stimulating free and open discussion has been shown in this investigation to have contributed to significant differences in the manner in which students talk critically about qualities and aspects of modern paintings.

Careful organization of the language used appropriately at the various levels of criticism and structuring of visual experiences preferably by comparing art works would create situations conducive to worthwhile aesthetic experiences. Though much might be said for studio-oriented approaches to art appreciation, a concentrated unit of criticism of art works along lines similar to that proposed in this study might enable students to become more aware of their art heritage as well as current developments in the visual arts, and more sensitive to their own individual artistic efforts and appreciative of design in the man-made environment.

The results of this study are supportive of the findings of Wilson<sup>90</sup> that by careful programming it is possible to change the ways in

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<sup>90</sup>Wilson, op. cit.





which young adolescents look at paintings, what they see and how they talk about the various aspects and qualities they perceive. These outcomes have many implications for art education content and method at all levels, especially for what might be undertaken in the elementary and secondary schools.

## VI. RECOMMENDATIONS FOR FURTHER STUDY

A worthwhile area of research would be analysis of the changes in preference for, and attitude towards, selected art works after comparing methods employing discussion, studio work and discussion and individual study approaches at the elementary or secondary levels.

A study similar to this investigation concerning criteria relevant to criticism of Architecture or Industrial Design might prove of value in research toward more worthwhile programs in appreciation.

Another study related to this investigation might be comparison of teacher-student discussion with student-student discussion in criticism of art works which would be recorded on audio tape and analyzed for the amount, sources and levels of critical talk.

Investigation of the optimum conditions necessary for effective instruction in art appreciation, such as classroom organization, teacher-pupil ratio and audio-visual materials required would be of immense assistance to teachers in the field.

The effectiveness of art appreciation instruction through television on a local or province-wide scale has interesting possibilities as a research area.

Art appreciation instruction using pairs of art works for



comparison holds great promise as an effective approach at the secondary level. A study comparing this approach with other methods is worthy of research time.

Replication of this study using the same instructional content but an individualized program learning approach through teaching machines is worthy of careful consideration.



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## APPENDIX A



## SAMPLE LESSON

One of two lessons on the Critical Process level, Description, is briefly outlined here. There are 3 variations of the lesson, a different approach for each of the experimental groups. Note the same objectives, content and visual materials, but different teacher and student activities, for each group.

### Lesson 3: **DESCRIPTION**, Part 1

Objective 1: To become acquainted with the use of language in the description of what is seen in modern paintings.

#### Content:

1. Description defined and criteria of description.
2. Describing:
  - a) names of things
  - b) lines
  - c) shapes
  - d) colours
  - e) textures
3. Technical analysis - kind and application of paint.
4. Directions and locations of: lines, shapes, colours, textures.

#### Visual Materials

Picasso paintings in slide form paired for comparison:

- |                         |                            |                      |
|-------------------------|----------------------------|----------------------|
| 1. African Gosol        | 1. Seated Woman            | 1. The Ironing Woman |
| 2. Head of a Woman      | 2. Young Girl Near the Sea | 2. Seated Nude       |
| 1. Mother and Child     | 1. Harlequin               |                      |
| 2. Harlequin and Family | 2. Pierrot and Harlequin   |                      |
| 1. Les Saltimbanques    | 1. Still Life              |                      |
| 2. The Three Dancers    | 2. Enamelled Casseroles    |                      |



## Group 1 Formal

Teacher Activities

1. Defining Description as a process of taking inventory, of noting what is there to be seen in the painting.

Avoiding the drawing of inferences. We want only to arrive at a simple account of "what is there", the kind of listing with which any reasonably observant person would tend to agree. There should be no tendency toward valuing or explaining what is described. This assures that description is complete. The criterion is minimal disagreement.

2. Describing:
  - a) names of objects, trees, persons, and so on.
  - b) principal forms or structures: lines, shapes, colours, textures in the case of abstract as well as naturalistic paintings.
3. Calling attention to the kind of paint used, how the paint has been applied by brush.
4. Referring to the location and direction of qualities such as line, shape, colour, texture.

Student Activities

Observing and listening carefully while the teacher compares pairs of slides by describing qualities.

## Group 2 FUNCTIONAL

Teacher Activities

Promoting individual and class discussion by asking these questions:

1. What would we be doing generally if we were to describe what we see in a painting?
2. How might this differ from explaining or interpreting what we see?
3. Could we all agree on what we interpret; explain; describe?
4. What criterion might be used to keep our descriptions from becoming coloured with inferences?
5. What are the objects, trees, persons, animals and so on that you see in these slides? If the work is abstract note the forms or structures; that is, lines, shapes, colours, textures.





6. Where are they located; in what directions do they move?
7. What kind of paint was probably used?
8. How has paint been applied with the brush?

Showing slides of Picasso paintings similar in subject matter, but different in style to illustrate how to describe their qualities.

### Student Activities

Observing pairs of slides while:

1. Defining description and distinguishing between describing, explaining and judging.
2. Deciding to restrict description to taking inventory.
3. Establishing a criterion of description.
4. Describing the names of persons, objects, animals, forms, structures.
5. Indicating directions and locations.
6. Identifying the medium, and application of paint.
7. Comparing pairs of slides as to above qualities.

### Group 3: Informal

### Teacher Activities

Presenting these major problems for student inquiry and discussion by slide comparison:

1. Observe these pairs of slides and try to describe what is seen.
2. Distinguish between describing, explaining and judging.

### Student Activities

Observing pairs of slides and inquiring into:

1. Discriminating between what should be described and what explained or interpreted.
2. Defining description
3. Setting up criteria for description
4. Describing objects, persons, forms, structures; noting locations and directions, type and application of paint



## APPENDIX B



## SUMMARY OF CONTENT PRESENTED IN ALL LESSONS

### Introduction to Modern Painting

#### Style

1. Objective - Realism; Naturalism; Impressionism
2. Formal - Intellectual: Cubism; Non-objective
  - Biomorphie
  - Aesthetic
3. Emotion - Romanticism; Distortion; Expressionism
4. Fantasy - Myths; Dreams; Hallucinations
  - Surrealism

#### Elements of Art

1. Line, Shape, Light and Dark, Colour, Texture.
2. Material; medium; technique

#### Principles of Design

1. Unity - Dominance; Subordination; Coherence
2. Balance - Formal; Informal
3. Rhythm - Repetition; Variation
4. Proportion
5. Contrast

#### Description

1. Objects - illusions
2. Conformations
3. Location; direction
4. Medium; technique

#### Interpretation

1. Forming Hypotheses
2. Meanings, Themes, Ideas
3. Relation to life

#### Formal Analysis

1. First Impressions
2. Qualities of Line
3. Light and Dark
4. Qualities of Colour
5. Mass and Space
6. Unity of Design

#### Evaluation

1. Comparison with others
2. Originality
3. Technique
4. Aesthetic effect





## APPENDIX C



## INSTRUCTIONS FOR ADMINISTERING WILSON ASPECTIVE

## PERCEPTION PRE- AND POST-TESTS

I have here a set of slides which I will show on the screen. These slides were made by taking photographs of paintings painted by artists.

When different people look at paintings they see many different things. It is just like when we look at a person. Some of us look at the person's face, some look at the hair or the clothes. Others might try to determine if the person is honest, while some may say the person is good, happy, sad, or even athletic. We might say the person has a square shape or a round head. Or we might say their green shoes go nicely with their blue coat. Each of us is looking for something different.

As I show the set of slides of paintings I would like you to write down what you see in the painting or what you think about it. Remember, there could be many things you could write about the paintings.

Sometimes you may not have time to write all you want to write before we move to the next slide. This does not matter, just start writing about the new slide. Please don't worry about your spelling, because I am sure I can figure out what you are trying to say. Are there any questions?

I will show you one slide for practice and let you write about it and then I will stop the projector to see if you have any further questions before I show the rest of the slides. The first slide will be numbered 0. Please number all your responses.



## APPENDIX D





## EXAMPLES OF SCORING OF STUDENTS' RESPONSES

Formal Group, Student number 10Slide number 13, Pre-test:

Big trees and a country view. Lots of grass and flowers. It looks like a road widening on a hill. There is a breeze.

Lit<sub>d</sub> - 2      D - 1      Lit<sub>i</sub> - 1

Slide number 13, Post-test:

An emotional painting of a country side in naturalist form. This is the end of the afternoon and the moon is just out. A wind blowing in the trees and grass. In the background is some hills or mountains. It gives me a feeling of freeness. The colours are plain and they are basic, mostly used are yellows, and blues.

NS-1   M<sub>d</sub>-2   Lit<sub>i</sub>-1   AD-1   C<sub>d</sub>-1   C<sub>fa</sub>-1

Functional Group, Student number 34Slide number 9, Pre-test:

It looks like an aireal picture (modern) of the city sidewalks with the houses in there places. Its not very interesting.

Lit<sub>d</sub>-2      Lit<sub>i</sub>-1      NC-1

Slide number 9, Post-test:

Boogie Woogie, I think this shows the activeness of a city in the night. I think this because of the lines showing streets and the colored squares showing either cars or the lights of the city. The big rectangles show buildings. I think this is quite original because I don't think artists would draw things in that way. It would be hard to see the meaning of it because all you could see at first was a mass of colors. It also looks like a map of the city, showing where all the houses are and the streets. The first thing I look at are the colors and design in this picture. There is a contrast in shapes and colors. What balances it out I think are the colors. I think this is quite a good painting because it looks like he had to use a ruler to make the lines so straight and even. I think this artist wants to show the fun on the town in the evening with all the lights, theatres, restaurants. He uses much repetition in the colors and shapes especially the color yellow and red and the shapes squares and rectangles. It looks as if the picture is being viewed from a plane or a helicopter just landing. The lines are all about the same.

NW-2   AP-1   L<sub>d</sub>-2   C<sub>d</sub>-2   S<sub>d</sub>-2   Lit<sub>d</sub>-2   Lit<sub>i</sub>-1   FA-2   RA-3   L<sub>fa</sub>-1   AD-1



Informal Group, Student number 56Slide number 1, Pre-test:

I see sadness, maybe death; roundness; flat colors; black and red colors; squares at background and other shapes; dark colors; shapeless figures.

AD-1 S<sub>d</sub>-2 C<sub>d</sub>-2 C<sub>fa</sub>-1 Lo-1 RA-1

Slide number 1, Post-test:

A mother with her child; dull colors; smoothness of paint; Cubism; Non-objective; sadness; illness; I do not like this picture because I can see feeling, what the artist wants. He shows sadness.

Lit<sub>d</sub>-2 C<sub>d</sub>-2 C<sub>fa</sub>-1 M<sub>d</sub>-2 T<sub>d</sub>-2 T<sub>fa</sub>-1 NS-2 MA-2 Ev-1

The following is included because it is one of the highest-scored single responses. Category codes and scores are placed underneath the qualities or aspects which are underlined. This is the response to slide number 8 by student number 27.

Colorful! See three blue horses at sunset; Informal balance;  
S<sub>y</sub>-1 Lit<sub>d</sub>-2 Lit<sub>i</sub>-1 RA-1

many curved lines; shapes are organic; has unity, contrasting colors  
L<sub>fa</sub>-1 L<sub>d</sub>-2 S<sub>d</sub>-2 S<sub>fa</sub>-1 RA-1 C<sub>fa</sub>-1 C<sub>d</sub>-2

are (red, blue), (green, orange). real objects. Have to look closely

before you see horses. Texture is rough; slobbered colors in background;  
Tex<sub>d</sub>-2 Lo-1

Expressionistic; Like it because horses look happy; is colorful.  
NS-2 Ev-1

Done well without fine painting; Informal balance; curved lines repeated.  
T<sub>d</sub>-1 M<sub>d</sub>-2 RA-1 RA-1



## APPENDIX E





## EXPERIMENTAL GROUPS' TOTAL SCORES OF FOUR CRITICAL PROCESS LEVELS

Formal Group		Functional Group		Informal Group	
Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
121	166	90	428	94	148
84	148	85	289	51	106
68	140	90	222	90	225
117	138	78	163	122	213
101	126	111	212	92	112
65	64	114	293	103	135
139	164	175	242	72	142
27	93	96	305	116	118
114	116	95	265	127	183
111	149	78	330	106	164
125	107	89	314	87	189
115	163	82	268	150	250
69	108	112	315	77	126
73	67	90	214	103	142
113	188	84	190	139	189
161	151	74	134	109	111
73	96	112	112	134	183
105	120	92	312	100	126
78	85	91	262	116	137
88	92	86	131	67	103
129	148	82	191	70	183
83	80	68	198	106	221
92	165	84	287	175	221
77	123	95	258	104	200
128	119	80	169	99	165
<u>105</u>	<u>74</u>	<u>76</u>	<u>194</u>	<u>76</u>	<u>146</u>
2560	3170	2409	6298	2685	4240



## APPENDIX F



RANDOM PROCEDURE FOR SELECTING EQUAL NUMBERS  
OF BOYS AND GIRLS IN EACH EXPERIMENTAL GROUP  
FOR ANALYSIS OF THE EFFECT OF SEX ON TALK  
ABOUT PAINTINGS AT FOUR PROCESS LEVELS

Group 1 Formal		Group 2 Functional		Group 3 Informal	
Girls	Boys	Girls	Boys	Girls	Boys
1 omit	13	27 omit	40	53	68
2	14	28	41	54 omit	69
3	15 omit	29	42	55	70
4	16	30	43	56	71
5	17 omit	31	44	57 omit	72
6	18 omit	32	45 omit	58	73
7	19	33	46	59	74
8	20	34	47	60	75
9	21	35	48	61	76
10	22	36	49	62 omit	77
11	23	37	50 omit	63	78
12	24	38	51	64	
	25	39 omit	52	65	
	26			66	
				67 omit	

Group	Page	Table	Beginning at	Row	Column
1 Girls	557	I		3	5
1 Boys	560	IV		2	11
2 Girls	565	IX		5	1
2 Boys	561	V		9	3
3 Girls	558	II		2	13
3 Boys	all included				











**B29894**